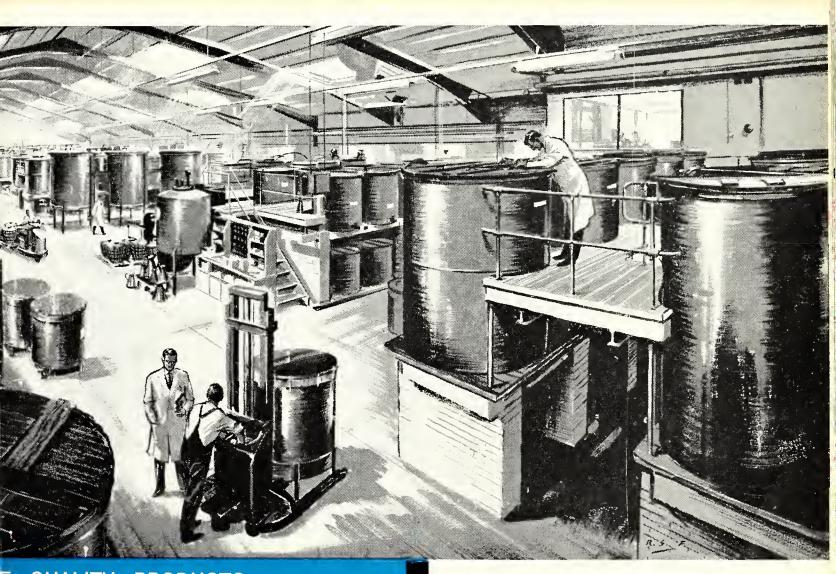


CHEMISTAND DRUGGIST

For Retailer, Wholesaler and Manufacturer

SEPTEMBER 19 1964



E QUALITY PRODUCTS

THE PHARMACEUTICAL,

D, DRINK,

MICAL & PERFUMERY INDUSTRIES

D ALLEN & SONS LTD. WHARF ROAD, LONDON, N.1.

CLErkenwell 1000 Telegrams: Stafalens, London, N.1

ong Melford, Suffolk and Wharf Road, London N.1, and farms at Long Melford.

ESSENTIAL OILS English distilled and imported.
PHARMACEUTICALS Liquid Extracts, Syrups, Emulsions, etc.
FLAVOURS Food, Confectionery, Soft drinks.
SPICES Milled & Saromex standardised.
INSECTICIDES Pyrethrum and Derris extracts.
PERFUMERY COMPOUNDS Toilet preparations and industrial.

Illustration shows a section of the new Galenical Building at Long Melford concerned purely in the manufacture of a wide range of products for the Pharmaceutical Industry.

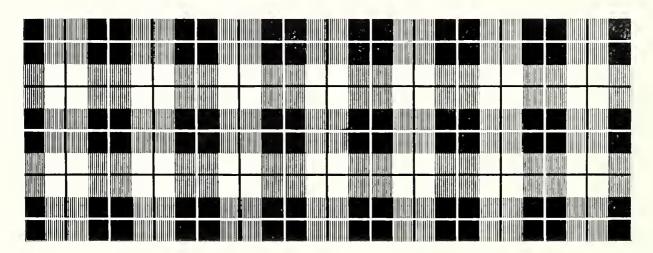


StaffordAllenS



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IN ENGLAND

Wherever your business is South of the Border you can enjoy the benefits of a national van delivery service for all your drug and wholesale requirements.

THE BRITISH DRUG HOUSES LTD.

(WHOLESALE DIVISION)

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THE CHEMIST AND DRUGGIST

ESTABLISHED 1859

THE WEEKLY NEWSPAPER FOR PHARMACY

and all sections of the drug, pharmaceutical, fine chemical, cosmetic, and allied industries

Official organ of the Pharmaceutical Society of Ireland and of the Pharmaceutical Society of Northern Ireland

Volume 182 September 19, 1964 No. 4414

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PUBLISHED BY

MORGAN BROTHERS (PUBLISHERS), LTD., at 28 Essex Street, Strand, London, W.C.2

Telephone: Central 6565



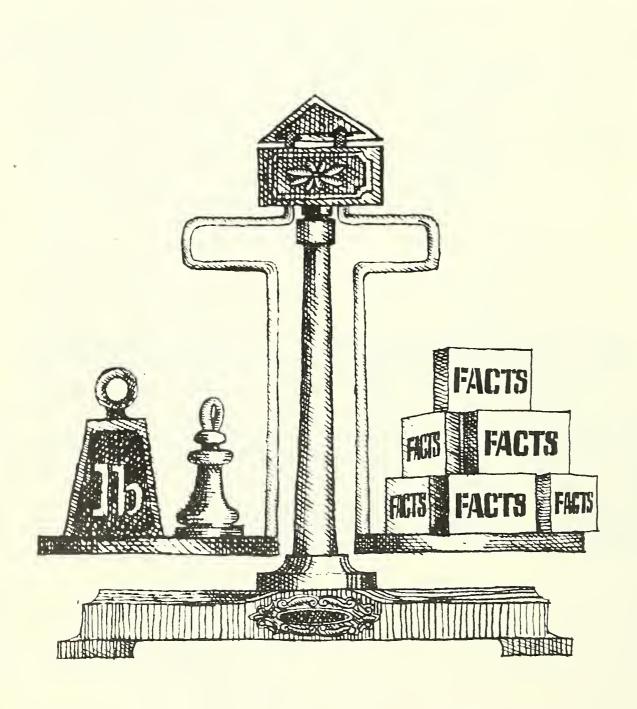
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which includes The Chemist and Druggist Diary and Year Book, £3 10s. Single copies 1s. 3d. each (postage 5d.).



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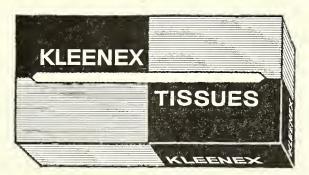
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Kleenex outsells its nearest competitor two and a half times over and outsells all other brands put together.

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14 FOR PRICE OF 12 75% PROFIT!! RETAIL VALUE 122/6d. YOUR COST 70/- ONLY

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MAUND & BERG

For Pharmacy Fittings,
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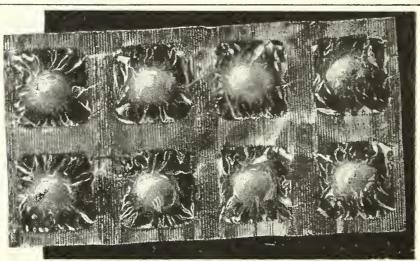
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The MATTHEWS & WILSON Strip Packing Service is a modern, complete specialist service by people who understand tablets. M & W will solve your strip packing problems with plain, printed or coloured materials—aluminium foil, polythenes or cellophanes—and catch cover packs. Modern plant ensures excellent service on large or small quantities. Enquire for fuller details,



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MANUFACTURERS OF THE WELL-KNOWN

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Telegrams: Macforbes Sowest London
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Registered Brands: VERLOSHEER, VERLOFABRIK, VERLONET.

All qualities approved under N.H.S.

BELTS, TRUSSES, SUSPENSORY BANDAGES, ETC.
THOS. GLOVER & SON, LTD., CARLTON, NOTTINGHAM
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ACTS LIKE MAGIC ON RHEUMATISM, FIBROSITIS ETC.

Infurno

39 TUBES FOR THE PRICE OF 36 — ONLY 73/2d.
— OVER 73% PROFIT —

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QUALITY GUARANTEED Prednisolone Tablets B.P. Mist. Phenoxymethylpenicil, 5 mg. White scored tablet 100 9/6 per 100 9/- per 100 8/9 per 100 B.N.F.: Ayrtons Pen. V.K. Syrup, 62.5 mg. per ml. 500 1000 60 ml. Retail 4/-Reserpine Tablets, B.P. Cost 24/- doz. Ayrtons Pen. V.K. Syrup, 60 ml. Retail 6/-0.25 mg. Blue tinted tablet 500 12/6 all 1000 24/- all Effervescent Potassium Tab-Cost 40/- doz. Tins of 50 24/- all 500 15/6 all lets, B.P.C. Phenoxymethylpenicillin 1000 28/- all Tablets B.P.: Compound Lobeline Sulphate Ayrtons Pen. V. Tablets, 20/- all 97/- all 185/- all 100 12/- all 250 29/6 all 500 58/- all **Tablets** 250 mg. White scored 100 500 1000 1000 114/10 all Ayrtons Pen. V. Tablets, 125 mg. Plain White Entomycin K. (5.7G Light Kaolin B.P., 300 mg., Neo-mycin Sulphate, B.P., in 14/- all 65/- all 120/- all 100 500 1000 each fl. oz). 4 oz. Retail 7/6 Cost 60/- doz. 15 G Hydrocortisone Oint-0.5% 1.0% 16 oz. Retail 24/ment B.P. (Greasy) 30/- dozen Cost 16/- each 48/- dozen Enquiries invited for quantity purchases, wholesale or retail

AYRTON, SAUNDERS & COMPANY LIVER POOL . PRESTATYN . DUBLIN

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natrodale vitamins



Many medical and clinical experts— as expressed in *The Lancet* (June 1963)—believe there is a need to ensure adequate nutrition.

There is ample medical evidence supporting the need for using natural vitamins containing the complete nutritional combination.

Stock Natrodale Vitamins Now.

Gain Greater Profit Per Sale Gain a Sales-Plus Factor Gain more Sales

For complete details write to:

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J. I. RODALE & COMPANY LIMITED
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RESALE PRICES ACT 1964

The Directors of André Philippe Ltd., wish to re-affirm their policy in support of price maintenance on all their products.

We feel that it has been in the best interests to protect both the trade and the consumer to the fullest extent.

We have therefore applied for exemption under the Act and until the Courts decide otherwise all André Philippe products will continue to be sold at the minimum retail selling prices as per their Price List.

André Philippe LIMITED · 71-71B GOWAN AVENUE FULHAM, LONDON, S.W.6 Telephone: RENown 2194/2397

Lederle Laboratories, a division of Cyanamid of Great Britain Limited, announce that the price of Aquamox quinethazone tablets will be reduced from 12th October, 1964.

	Old Trade Price	New Trade Price	List Price 19.9d .	
Aquamox Tablets 25's	14.6d.	13.2d.		
Aquamox Tablets 100's	£2.16.0d.	£2.11.0d.	£3.16.6d.	



Top of the lists! TRIPLE ACTION

GOLD DISCS

the successful treatment for combating common colds.

influenza chills and headaches

FOIL PACKED · MOST ATTRACTIVE PRESENTATION

showouters of one dozen cartons

Excellent terms and free samples on application

ARTHUR H. COX & CO. LTD. BRIGHTON, ENGLAND

THE FOREMOST TABLET HOUSE

THIS ->

... is the DURST RS35, the world's first amateur enlarger to match up to the precision of modern cameras. For 35mm negatives, the versatile RS35 will create or correct distortions and also make negatives, a truly wonderful enlarger of the highest quality — it sells for only £24. 16. 2. plus lens. The 606, for $2\frac{1}{4}$ square is similar in design and sells at £49. 11. 7. plus lens.



Sole distributor for Durst: A. G. Bozen, Italy.

PHOTOPIA LTD., Newcastle, Staffs. Photopia



London Showroom: 21 Noel Street, off Wardour Street, W.1
In Eire distributed by: F. Barrett & Co. Ltd., Dundrum Castle, Dublin 14.

MORLD-WIDE SERVICE ...

FOR ALKALOIDS and FINE CHEMICALS



EDINBURGH



From our works in Edinburgh we supply fine chemicals in bulk to an increasing number of pharmaceutical manufacturers all over the world. As leaders in the field of Alkaloids (Codeine, Morphine, Pholoodine, Atropine, Eserine, Pilocarpine, etc.) we offer an efficient, speedy and friendly service geared to suit customers' requirements. Most of our products are suitable for shipment by air and can be anywhere in the world within hours of leaving Edinburgh.

MACFARLAN SMITH LTD

EDINBURGH · LONDON · MONTREAL · SYDNEY · MELBOURNE · WELLINGTON and agents in 50 other countries

Help yourself to these rich Miners profits





Get biggest ever bonus offers on Miners hair products direct from Miners or through your wholesaler



NEW **AEROSOLS:**





Softly Firm Hair Spray 4/6 New softer hold for softer styling

Extra Firm Hair Spray 4/6 New formula for hard-to-handle hair

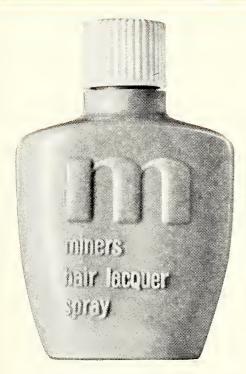
R PRODUCTS . . .



Biggest ever national advertising

Big spaces in the DAILY MIRROR, and 42 whole pages in HONEY, FLAIR, ROMEO, VALENTINE, MARILYN, FABULOUS, BOYFRIEND, MIRABELLE, TRUE STORY, TRUE ROMANCES, PHOTO-PLAY, and WOMAN'S STORY.

Backed by Miners top audience Luxembourg show 'World Top Pops' with Brian Matthew every Thursday.—Continuous from September to Christmas—right through the peak selling period.



Hair Lacquer in Squeeze Spray 2/-



Hair Lacquer Refill Bottle 1/3, Sachet 9d



Lacquer Remover Shampoo Bottle 1/3, Sachet 9d

DISTRIBUTORS: MYRAM PICKER LTD., SURBITON, SURREY. LOWER HOOK 5200. A MEMBER OF THE GALA COSMETIC GROUP LTD.

the big profit spinners ... for your peak selling period

NOW is your peak selling period for



BRITAIN'S TOP SELLING
THROAT PASTILLES
BACKED BY YEARS OF
NATIONAL ADVERTISING

DISPLAY MEGGEZONES AND CHILDREN'S MEGGEZONES

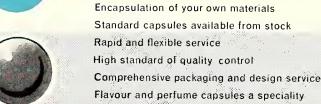


- The modern, elegant and hygienic dosage form
- Easy to swallow. Rapid release of contents
- Added protection for medicament, Accurate dosage
- Wide range of sizes and colours
- NEW! Tiny "MINI-CAPSULES" down to 1.0mg. contents



Let capsule specialists take care of your capsuling problems. Our development laboratory is equipped to assist you in the formulation of your new product. Whether you require oils or suspensions filled into SOFT SEAMLESS GEL-ATINE CAPSULES or dry powder products into HARD TWO PIECE CAPSULES, our modern, well equipped laboratories are at your disposal.

Special production to your specifications





EXTRA SALES APPEAL FOR YOUR NEW PRODUCT



B. & P. LABORATORIES LTD.

THE CAPSULE SPECIALISTS 9 PACKINGTON ROAD, ACTON, LONDON, W.3 telephone: ACOrn 6771/2



THE WORLD'S LEADING MANUFACTURER OF VITAMIN D2

CALCIFEROL B.P./U.S.P. XV | 40 MILLION I.U./GRAM. WATER MISCIBLE, DRY POWDER 200,000 I.U./GRAM. OIL CONCENTRATES TO CUSTOMERS REQUIREMENTS.

For years Vitamins Limited have specialised in research into the physiological and therapeutic activity of vitamins and now produce an unrivalled range of vitamin products.

All enquiries to: Bulk Sales Division, Vitamins Limited, Upper Mall, London, W.6.

VITAMINS FROM VITAMINS LIMITED





always ask for a hot water bottle by its first name -Dunlop

Nearly 20 million readers of WOMÁN'S OWN, WOMAN AND HOME, HOUSEWIFE, EVERYWOMAN and GOOD HOUSEKEEPING will see and remember this attractive illustration and compelling headline many times in the coming months.

And among these readers are plenty of potential customers for you. They will be asking to see the Dunlop range in your shop. So be prepared. Stock up with the top dozen by Dunlop—the five shown below and these other sure sellers-

SIZES 2 and 3, moulded bottles at 6/6 and 7/- respectively; COSILINE at 8/9; QUILTIE, with brushed fabric coat, 12/-; RENOWN, with a handle, in lavender shade, 9/3; ESKIMO/BEAR, a kiddies' bottle at 9/9; and the DEEP SLEEP, with similar features to the Cosimax, at 27/6.

STOCK UP NOW!





COSIMAX

Takes boiling water safely Seamless latex with velvety cover. Fawn, Pastel Blue, Pastel Pink—in individual carton.

Retails at 32/6.

MAXFORT

The bottle with a handle. Fluted pattern on one side, plain on the other. Pastel shades—Blue, Pink, Green. Retails at 12/-.

FLAG

popular Dunlop Smooth rounded Retalls at 7/9

GEORGIAN

Brushed fabric cover with attractive oak leaf design in Blue, Red or Lavender

The perfect foods for the growing child

Cow & Gate Dairy Junior Foods



.... **now** available in the **12** delicious varieties mothers have asked for.

As from October 1964 the **new** range of Cow & Gate Dairy Junior Foods will be backed by extensive sales stimulating full colour advertisements in the leading Women's and Nursing magazines. Be sure **you** can meet the demand we will create.

Attractive promotional material will be sent on application to Cow & Gate Ltd., Dept. 164, Guildford, Surrey.

Bonus of 1/- per case (of 2 dozen tins) on all orders received by **31st October**, 1964.

Order now direct or through your wholesaler.

6765

Produced by the Makers of

COW & GATE WUS

The FOOD of ROYAL BABIES

TWELVE VARIETIES

CARAMEL
MILK PUDDING

HONEY

MILK PUDDING

CHOCOLATE

MILK PUDDING

CREAMED SEMOLINA AND
APPLE
MILK PUDDING

CREAMED SEMOLINA AND

MANDARIN MILK PUDDING

SEMOLINA

MILK PUDDING CREAMED

TAPIOCA
MILK PUDDING

CREAMED SAGO MILK PUDDING

GROUND RICE
MILK PUDDING

CREAMED

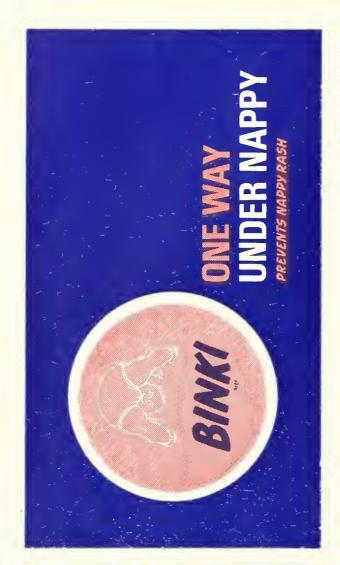
BARLEY

MILK PUDDING

CREAMED PORRIDGE

EGG CUSTARD

FROM ALL CHEMISTS
6 oz tins for only 9d





ONE WAY
UNDER NAPPIES
ARE NEW 15/

Tailored by ELSINORE

BINKI

2 for 3/11

FROM YOUR USUAL WHOLESALER



Great three-stage advertising campaign for

HERBAL COUGH MEDICINES



to be promoted to more people than ever, with greater impact than ever, throughout the entire coughs and colds season

THE CHEMIST AND DRUGGIST 18 September 19, 1964 19

STAGE 1

LIQUERUTA
PRESS
ADVERTISING
BEGINS ON
NOVEMBER 10

HALF PAGE ADVERTISEMENT IN THE

Daily Express

ON NOVEMBER 10 (Readership 12,975,000)

13" x 5 COLUMNS ADVERTISEMENT IN THE

News of the World

ON NOVEMBER 15 (Readership 17,042,000)

HALF PAGE

ADVERTISEMENT IN THE

Daily Mirror

ON NOVEMBER 17 (Readership 14,830,000) HALF PAGE ADVERTISEMENT IN TH

Sun

ON NOVEMBER 20 (Print Order 3,000,000)

HALF PAGE ADVERTISEMENT IN THE

Sunday Mirro

ON NOVEMBER 22 (Readership 13,999,000)

5 16" DOUBLE COLUMN ADVERTISEMENT IN THE

Daily Mirror

ON NOVEMBER 24 (Readership 14,830,000) Sun

6" DOUBLE COLUN ADVERTISEMENT IN THE

ON NOVEMBER 2 (Print Order 3,000,000)

6" DOUBLE COLUMN ADVERTISEMENT IN THE

> Daily Express

ON NOVEMBER 25 (Readership 12,975,000) 5点" DOUBLE COLU ADVERTISEMENT IN THE

> Sunday Mirror

ON NOVEMBER 2 (Readership 13,999,000

STAGE 2

LIQUFRUTA

PRESS ADVERTISING

CONTINUES

THROUGHOUT

DECEMBER

AND INTO

JANUARY

HALF PAGE ADVERTISEMENT IN THE

Sun

ON DECEMBER 1 (Print Order 3,000,000)

13" x 5 COLUMNS ADVERTISEMENT IN THE

Daily Express

(Readership 12,975,000)

8" TRIPLE COLUMN ADVERTISEMENT IN THE

> Daily Mirror

ON DECEMBER 4 (Readership 14,830,000)

8" TRIPLE COLUMN ADVERTISEMENT IN THE

> Sunday Mirror

ON DECEMBER 6 (Readership 13,999,000) MENT IN THE

ON DECEMBER 2

6" DOUBLE COLUMN ADVERTISEMENT IN THE

Sun

ON DECEMBER 8 (Print Order 3,000,000)

6" DOUBLE COLUMN ADVERTISEMENT IN THE

> Daily Express

ON DECEMBER 10 (Readership 12,975,000) 13" x 5 COLUMNS Advertisement in the

News of the World

ON DECEMBER 13
(Readership 17,042,000)

Daily Mirror

5 18" DOUBLE COLUMN ADVERTISEMENT IN THE

ON DECEMBER 15 (Readership 14,830,000)

5ቴ" DOUBLE COLUMN ADVERTISEMENT IN THE

Sunday

Mirror

ON DECEMBER 20 (Readership 13,999,000)

5 18" DOUBLE COLUI ADVERTISEMENT IN THE

> Sunday Mirror

ON JANUARY 3 (Readership 13,999,000)

6" DOUBLE COLUM ADVERTISEMENT IN THE

> Daily Express

ON JANUARY 5 (Readership 12.975,000)

HALF PAGE Advertisement in the

Sun

ON JANUARY 8 (Print Order 3,000,000)

DON'T HAVE ANOTHER SLEEPLESS NIGHT THROUGH COUGHING



Liqufruta loosens and clears away the lung-clogging phlegm that causes coughs

THE UNIQUE COMBINATION OF HERBS IN LIQUERUTA BRINGS WONDERFUL RELIEF WITH THE FIRST SPOONFUL

WHETHER the cause of that sleep-stealing cough is phlegm or dry, irritated throat, you need a spoonful of Lequiruta to bring fast and effective relief. Liquiruta's combination of herbs helps to free you from phlegm and soothe your sore throat; and because of this unique herbal formulation, you can safely keep taking Liquiruta at regular intervals until complete relief is obtained.

TREATMENT AT THE SOURCE OF YOUR COUGH
With your first spoonful of Liqufruta, the special ingredients of Linseed, Iceland
Moss and Irish Moss comfort the inflamed membranes of your throat, easing
hoarseness promptly and effectively. Then, the Liquorice, Extract of Ipecacuanha and Aniseed Oil in Liqufruta, after being absorbed into your blood-

stream; are carried to your lungs, where they loosen clogging phlegm and facilitate easy expectoration.

ReLIEF WITH EVERY BREATH THAT YOU TAKE
While being digested, Liquifruta's essential oils (Garlie Oil, Peppermint Oil
anised Oil) release vapours which continuously rise to the throat and
mouth and are breathed into the lungs. You obtain relief with every breath
that you take, for these vapours, which are antiseptic in their action, help to
kill infecting organisms which cause phigm. What's more, their continuous
action helps to prevent phigm from reforming.

THE COMPLETE, EFFECTIVE COUGH MEDICINE
It is Liquiruta's combination of herbs and essential oils which makes it the
complete, really effective cough medicine—soothing sore throat as it relieves
the most stubborn cough. Liquiruta: from chemists and stores everywhere.



LIQUFRUTA STANDARD

The original herbal cough medicine. 3/- and 6/LIQUFRUTA
MEDICA
Extra strong, for stubborn coughs. 3/4 and 6/9

LIQUERUTA WITH HONEY Extra soothing, especiall

for children, 3/3

DON'T HAVE ANOTHER SLEEPLESS NIGHT THROUGH COUGHING



Liqufruta loosens and clears away the lung-clogging phlegm that causes coughs

THE UNIQUE COMBINATION OF HERBS IN LIQUERUTA BRINGS WONDERFUL RELIEF WITH THE FIRST SPOONFUL

BRINGS WONDERFUL RELIEF WITH THE FIRST SPOONFUL WHETHER the cause of that steep-stealing cough is plagmar or by, intraded throat, you need a spoonful of Liquifruta to bring fast and effective relief. Liquifruta's combination of herbs helps to free you from piblegm and soothey your sore throat; and because combination of herbs helps to free you from piblegm and soothey your sore throat; and because of this unique herbal formulation, you can safely keep laking Liquifruta, are supplied to the supplied herbal formulation, you can safely keep laking Liquifruta, are supplied to the supplied herbal formulation, you can safely keep laking Liquifruta, and the supplied herbal formulation, you can safely keep laking Liquifruta, and Irish Moss comfort the inflamed membranes of your throat, easing hoarseness promptly and Irish Moss comfort the inflamed membranes of your throat, easing hoarseness promptly and effectively. Then, the Liquionere, Extract of Ipecacuanha and Amseed Oil in Liquifruta, after being abstored into your bloodstream, are carried to your lungs, where they loosen clogging



Don't have another sleepless night through conghing



Liqufruta loosens and clears away the lung-clogging phlegm that causes coughs

WHETHER the cause of that sleep-stealing cough is phlegm or dry, irritated throat, you need a spoonful of Liqufruta to bring fast, effective relief. Liqufruta actually gets to the source of your cough. Its unique combination of herbs helps to free you from phlegm and soothe your sore throat. You obtain relief with every breath you take because Liqufruta's essential oils release antiseptic vapours, which rise to the throat and mouth and are breathed into the lungs, helping to kill infecting organisms which cause phlegm. And you can safely take Liqufruta at regular intervals until complete relief is obtained. Liqufruta is the complete, really effective cough medicine. From chemists and stores everywhere





LIQUERUTA TELEVISION ADVERTISING 160

quarter-minute
T.V. advertisements
week after week
from January 11
to March 12

IN THE FOLLOWING T.V. AREAS

LONDON

MIDLANDS

LANCASHIRE

YORKSHIRE

SOUTHERN

TYNE TEES

ANGLIA

CENTRAL SCOTLAND

GRAMPIAN

SCOTTISH

BORDER

CORNWALL AND DEVON

> WALES AND THE WEST

> > ULSTER

STAGE 3 LIQUIRUTA PRESS ADVERTISING

FROM JANUARY 14 TO MARCH 16

Three Half Page advertisements in the SUN on January 21 February 9 and March 4

AS WELL AS ADVERTISEMENTS WEEK AFTER WEEK, IN THE

News of the World
Daily Mirror
Sunday Mirror
Daily Express
and Sun

LIQUERUTA BONUSES in addition to PARCELS DISCOUNTS

BONUSES

These will apply to all orders received between September 18 and November 18

6 dozen assorted LIQUFRUTA

5% bonus

12 dozen assorted LIQUFRUTA

 $7\frac{1}{2}\%$ bonus

24 dozen assorted LIQUFRUTA

10% bonus

PARCELS DISCOUNTS

TRADE VALUE OF EACH

OF EACH ORDER £5 £10 £25 £50

DISCOUNT 33% 5% 7½% 10%

Carriage free if order is £3 and over (trade value)

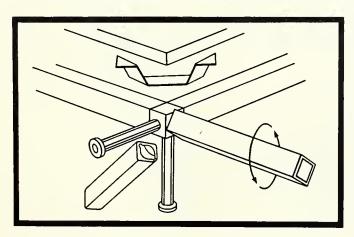


VERSI-FORM





A NEW SYSTEM TO REVOLUTIONISE DISPLAY!



VERSI-FORM employs $\frac{1}{2}$ inch square anodised tubes in various lengths from 6 inches to 4 feet, in semi-matt black or silver and incorporates a series of connectors. The connectors are die-cast and finished in matching colours. The tubes are locked in position by turning them through 90°, which expands a plastic gland on a cam principle and forms a solid joint.

VERSI-FORM is a new type of display system enabling you to build a wide variety of attractive and elegant displays, quickly and economically.

VERSI-FORM is simple to use and easy to store, combining strength with lightness. All the tubes are anodised either silver or semi-matt black enabling you to create structures ready for use.

VERSI-FORM IS FUNCTIONAL the unique locking connectors enable the designer or display man to develop his own ideas and make the initial structures without any special tools or outside aid.

VERSI-FORM IS FLEXIBLE the various lengths of tube are easily assembled and dismantled allowing it to be used again and again for innumerable different structures. It is ideal for displaying a wide range of merchandise.

ECONOMICAL TOO!

VERSI-FORM is available from stock in a large number of standard lengths from 6" to 4" which answer most requirements but if necessary can easily be cut to size without detriment to the finish. The equipment can be used continuously and not just for the odd seasonal display.

Bring your displays up-to-date with VERSI-FOF

Write <u>now</u> for leaflet giving full details.
VERSATILE FITTINGS (WHS) LTD
10 New Fetter Lane, London, E.C.4.
Telephone: FLEet Street 3581



ROYAL GUARD

Newest, most vital force in the field of men's toiletries takes a full page in full colour in the **Paily Mail** ...Friday, December 4th



GREAT NEW TELEVISION AND PRESS ADVERTISING CAMPAIGN FOR

WOODWARD'S Gripe Water

BEGINS ON OCTOBER 30



FULL DETAILS ARE GIVEN ON THE NEXT THREE PAGES

WOODWARD'S Gripe Water

WILL BE CONTINUOUSLY ADVERTISED
WEEK AFTER WEEK FROM OCTOBER
TO MARCH BY

168 quarter-minute T.V. advertisements throughout the entire I.T.V. network

AS WELL AS BY

advertisements
in large readership
National newspapers,
women's magazines
and 'mother and baby'
magazines



NEW larger bottle (5 fl. oz.) NEW eye-catching carton NEW price of 31-



LONDON

November 2nd, 6th, 17th, 25th

December 4th, 18th

January 11th, 22nd

February 12th, 26th

March 5th, 12th

CENTRAL SCOTLAND

November 2nd, 6th, 14th, 21st

December 1st, 12th

January 11th, 30th

February 11th, 27th

March 3rd, 13th **MIDLANDS**

November 2nd, 6th, 14th, 24th

December 5th, 14th

January

13th, 23rd

February

4th, 21st

March

4th, 13th

SCOTTISH BORDER

November November

2nd, 6th, 14th, 28th December

7th, 19th

January 11th, 23rd

February

5th, 20th

March 5th. 13th

ELEVISION ADVERTISING AND ROM THE ADVERTISING FILM



Did baby wake you last night?



keep a bottle of



Woodward's Gripe Water pleasantly relieves baby's wind pains...



Woodward's Gripe Water handy

ANCASHIRE

November d, 5th, 14th, 25th

December 5th, 16th

January 11th, 23rd

February 12th, 21st

March 5th, 13th

November <mark>ad, 6</mark>th, 21st, 28th

> December 10th, 18th

11th, 23rd

4th, 20th

March 4th, 13th

YORKSHIRE

November 2nd, 5th, 14th, 25th

> December 5th, 16th

January 11th, 23rd

February 12th, 21st

March 5th, 13th

November

SOUTHERN

November 2nd, 6th, 14th, 28th

December

4th, 12th January

11th, 30th February

11th, 28th

March 5th, 13th

TYNE TEES

November 2nd, 6th, 14th, 28th

> December 5th, 15th

January 11th, 23rd

February 6th, 20th

March 5th, 13th

CHANNEL ISLANDS

November

2nd, 6th, 15th, 22nd

December

4th, 18th

January

ANGLIA

November 2nd, 6th, 14th, 21st

> December 5th, 18th

January 11th, 23rd

February

5th, 20th

March 5th, 13th

ULSTER

November

2nd, 6th, 14th, 25th

December

5th, 17th

January

GRAMPIAN

January

February

CORNWALL & DEVON

2nd, 6th, 21st December 1st, 12th, 18th

January 11th, 20th

February 9th, 20th

March 5th, 12th

WALES & THE WEST

November 2nd, 6th, 14th, 28th December

5th, 17th January

11th, 23rd February 13th, 27th

March 5th, 13th

11th, 24th February 5th, 22nd

March

5th, 12th

12th, 30th February

12th, 27th

March 5th, 13th

DETAILS OF PRESS ADVERTISING ON THE NEXT PAGE

SCHEDULE OF WOODWARD'S GRIPE WATER NATIONAL PRESS ADVERTISEMENTS

Daily Express

(READERSHIP 12,975,000)

6" DOUBLE COLUMN ON NOVEMBER 5, NOVEMBER 17, DECEMBER 3, JANUARY 26, FEBRUARY 17 AND MARCH 2

4" SINGLE COLUMN ON NOVEMBER 25, DECEMBER 17, JANUARY 14, FEBRUARY 4 AND MARCH 12

Daily Mirror

(READERSHIP 14,830,000)

8" TRIPLE COLUMN ON OCTOBER 30 5¹/₁₆" DOUBLE COLUMN ON NOVEMBER 11, DECEMBER 9, JANUARY 5, FÉBRUARY 9 AND MARCH 19 3¾" SINGLE COLUMN ON NOVEMBER 19. DECEMBER 29, JANUARY 20, FEBRUARY 24 AND MARCH 4

Sunday Mirror

8" TRIPLE COLUMN ON NOVEMBER 8 516 DOUBLE COLUMN ON DECEMBER 20 JANUARY 24, FEBRUARY 7 AND MARCH 7 3¾" SINGLE COLUMN ON NOVEMBER 22, DECEMBER 6, JANUARY 10, FEBRUARY 21 AND MARCH 21

News of the World

(READERSHIP 17,042,000) 5寸" DOUBLE COLUMN ON NOVEMBER 15 4" SINGLE COLUMN ON DECEMBER 13 JANUARY 17, FEBRUARY 14 AND MARCH 14

(READERSHIP 9,751,000) **OUARTER PAGES** ON NOVEMBER 7. JANUARY 23 AND MARCH 13

True Story

(READERSHIP 1,675,000)

WHOLE PAGES IN DECEMBER AND FEBRUARY

True Romances

(READERSHIP 1,434,000) WHOLE PAGES IN DECEMBER AND FEBRUARY

(READERSHIP 1,011,000) WHOLE PAGES IN DECEMBER AND FEBRUARY

Woman's Story

(READERSHIP 289,000) WHOLE PAGES IN DECEMBER AND FEBRUARY

Mothercare

(CIRCULATION 252,000) WHOLE PAGE IN NOVEMBER

SMALL SCALE REPRODUCTIONS OF SOME OF THE ADVERTISEMENTS



A teaspoonful of Woodward's Gripe Water brings back a baby's smile

WHEN YOU WERE A BABY, you were probably given Woodward's Gripe Water to relieve wind pains, teething discomfort and minor tummy upsets, as were your mother and grandmother before you. For well over 100 years, Woodward's Gripe Water has been the Nursery stand-by, It's safe and gentle, and helps to keep babies well and happy, particularly at the difficult period when they are teething.



ALWAYS KEEP A BOTTLE OF WOODWARD'S GRIPE WATER HAND

Teething?

WOODWARD'S Gripe Water

Upset tummy?



WOODWARD'S Gripe Water

Wind pains?



WOODWARD'S Gripe Water

Baby Book

(CIRCULATION 125,000)

WHOLE PAGES IN JANUARY AND MARCH

Mother

(CIRCULATION 111,936)

WHOLE PAGES IN DECEMBER AND MARCH

Mother & Baby

(CIRCULATION 51,000) WHOLE PAGES IN DECEMBER AND FEBRUARY

Parents

(CIRCULATION 50,050) WHOLE PAGES IN DECEMBER AND MARCH

OTHER FAMOUS WOODWARD'S NURSERY PRODUCTS

WOODWARD'S BABY SOAP Now in one-dozen display outer

WOODWARD'S TEETHING JELLY Now in one-dozen display outer

WOODWARD'S SILICONISED **NURSERY CREAM** Now in one-dozen display outer

WOODWARD'S BABY POWDER WOODWARD'S BABY SHAMPOO

Earn additional discounts by ordering Woodward's Gripe Water and other Woodward's Nursery Product with your Liqufruta order. See details of the Liqufruta Bonuses in the Liqufruta advertisement in this issu

IMPORTANT ANNOUNCEMENT

RESALE PRICE MAINTENANCE

UNIVERSAL LABORATORIES LIMITED and BRITISH ALKALOIDS LIMITED announce that they are taking steps to secure exemption under the Resale Prices Act, 1964, for their entire product range, made up of:—

LIMMITS

TRIMETTS

LIMMISAX

DAXAIDS

SOOTHE

CLEER

LEEVE

T.C.P. LIQUID

T.C.P. OINTMENT

T.C.P. TOOTHPASTE

T.C.P. PASTILLES

T.C.P. SHAVING CREAM

T.C.P. COLLOIDAL EMULSION

T.B.P.

PHAGOL

T.C.P. SOAP

DILTRON

32.3 Sespe

Win NEW sales with PHILIPS



right across the board!

Important new products join the established favourites in the bigger-than-ever, better-than-ever Philips range.

PHILISHAVE JUBILEE FREE GIFT — **GOLD INITIALS OFFER FOR EACH PHILISHAVE**

To mark the Jubilee Year of the 'Philishave', Philips are making a superb free offer to purchasers of the 'Philishave' in Great Britain. Give every customer who buys a 'Philishave', between now and Christmas, the explanatory leaflet about it. After filling in a simple form and posting it, together with the guarantee card, to Philips, each customer will be sent two gold plated initials. These will stick permanently on the shaver case - and greatly enhance it as a personal possession. Altogether, it's a delightful extra-and an extra sales-booster!

PHILISHAVE

Envoy (Floating Head Model) World-famous Rotary Action plus selfadjusting Floating Heads for the supreme luxury of 'Personal Touch' shaving. £8.12.6.

Superjet (Fixed Head Model) Fantastic value—never before a dual-volt Rotary Action 'Philishave' at such low cost | £6.6.0.

Cordless (Battery Model) Completely self-contained for superb Rotary Action shaving anytime, anywhere, No flex at all ! Only £5.5.0.

Philips Home Barber Kits Ideal for trimming and hairdressing for all the family. Available for use both with Floating Head and Flip-Top models of the 'Philishave': £2.2.0. Hair Trimmers for moustaches and "sideboards": 17/6.

PHILIPS ELECTRIC BLANKETS A range of four dependable underblankets -Controlled Heat, 3-Heat Standard, 1-Heat Standard, and Family-plus the new and magnificently luxurious Philips Overblanket in 100% Acrilan, Prices from as little as £3.19.6.

PHILIPS NEW 3-SPEED FOOD MIXER

Even more stylish, even more practical. The right speed for every type of mix—and a fantastically low price! £5.5.0.

PHILIPS HEALTH LAMPS

Ultraphil The market-leader among ultra-violet lamps, famous for its health-giving 'Alpine Sunshine'. £8.8.0.

Ultraphil with Timer. A new version of the top-selling Ultraphil, with a very helpful timing device. £10.10.0.

Infraphil with Concentrated Beam—so much in demand for faster, more effective relief from rheumatism, etc. £4.17.6.

Ultra-violet and Infra-red Combined Lamp. The new *complete* health lamp—complete with timer and distance cord, too | £16.16.0.

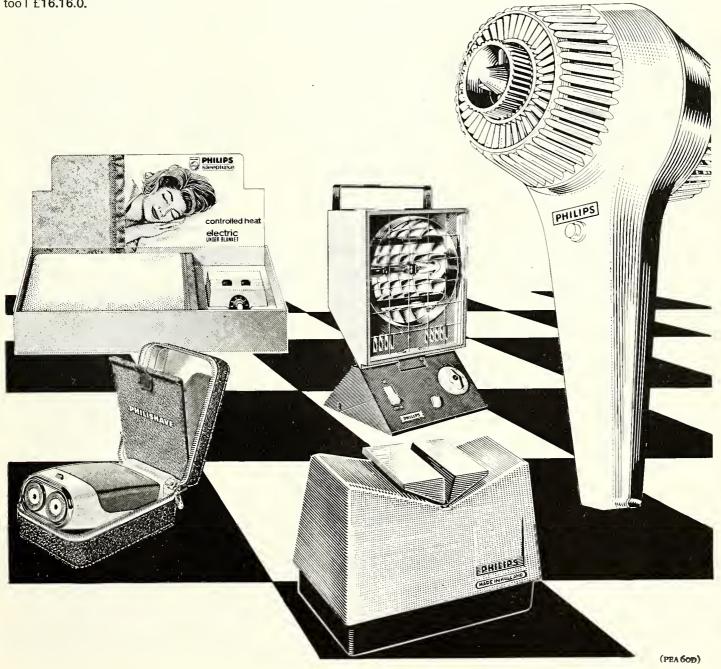
PHILIPS HAIR DRIERS

Hand Model Light and easy to carry, ideal for use in the home or when travelling. Unique variable air-control. £3.9.11. Optional extras: Stand 7/6; Hose and Air-Diffuser Hood £2.

Hood Model Designed on the straight airstream principle to give the fastest, most efficient drying at home, £8.10.0. Optional extra: Stand £2.2.0.

PHILIPS ELECTRIC KNIFE SHARPENER

Gives a keen edge in seconds to all kinds of scissors and knives. £3.3.0.



LOOK!

MILLICENT MARTIN does the selling in the most powerful-ever campaign for NULON!

It's news! It's the one and only Millicent Martin-

putting all her vivid personality into an exciting 30-second television commercial. Glamorous – exciting – always watchable – she'll be recommending Nulon to countless thousands of your customers in every television area in the country! It's a new campaign with real woman-appeal!

Look! Nulon's in a new bottle!

New shape – new label – new cap. Elegant; up to date; full of sales appeal. And inside, Britain's top-selling hand cream.





This big new campaign with Millicent Martin starts in November—five months of high frequency spots.

Look again!

Dramatic new display material! There's Millicent in full colour on showcards, plus a counter merchandiser pre-packed with the new bottles and available at special extra discount.

NULON IS ON REALLY GENEROUS BONUS TERMS IN SEPTEMBER/ OCTOBER

RECKITT & SONS LTD., HULL

GROUP BONUS
FOR EUTICAL
SPECIALITIES Products Incorporated

AIDEX Burn and Wound Cream **DENTOSINE** for Mouth Hygiene SANOIDS MOUTHWASH TABLETS **EUPINAL** Asthma and Bronchitis Treatment GYNOPAX TABLETS for the relief of Menstrual Pains

THERMOID CREAM for the relief of Rheumatism, Neuralgia and other nerve pains "MINSTER" BRAND Children's Cherry or Raspberry Cough Linctus

> SANOID DUSTING POWDER SANOID BABY POWDER SANOID BABY CREAM SANOID BABY SOAP

TUSSOLA Cough Mixture **HEALO** Skin Ointment G.P. SOAP

Group **Bonus** Plan

One per dozen free on orders of three dozen or more [of one item or assorted in minimum quantities of one dozen per size. Bonus items free of Purchase Tax.

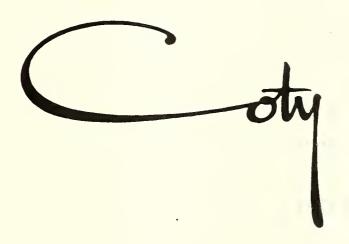
Minimum order acceptable £5 (excluding Purchase Tax) Carriage Paid

CUXSON, GERRARD & CO., LTD. Oldbury · Birmingham

IMPORTANT ANNOUNCEMENT

RESALE PRICE MAINTENANCE

COTY (ENGLAND) LTD announces that it has decided to apply for exemption under the Resale Prices Act, 1964, in respect of its entire product range.



19th September, 1964

Important announcement from L'Oreal of Paris!

*New Look*New Formula

L'Oreal of Paris announce the introduction of a new hairspray to the British market—Elnett Satin! It's already the biggest selling hairspray in France.



New Look

Elnett Satin comes in elegant burnished-gold cans. Their superb colour and design make them the most displayable, the most buyable hairsprays on your shelves. Special display units help you to make the best use of valuable space.



New Formula

The new conditioner in Elnett Satin leaves the hair soft, clean and shining. Elnett Satin holds the hair all day then brushes away. There are two strengths to suit everyone—Normal Strength for normal hair and Extra Strength for greasy or hard-to-control hair.



New Advertising

From early October, millions of women will be seeing whole-page and half-page advertisements for Elnett Satin in the top women's magazines.

The most popular hairspray in France



from L'Oreal-Paris World's greatest makers of hair beauty products Manufactured and distributed by Golden Limited, Berkeley Square House, Berkeley Sq., London W1. Mayfair 8240

DUNSTER LABORATORIES LIMITED

announce
that due to the increase in the
amount prescribed and
to meet hospital demand

COPROL

SPECIFIC COPROLISING AGENT

THE SUCCESSFUL ORAL TREATMENT FOR HAEMORRHOIDS

is now available in packs of 1,000 capsules

trade price 360/- (plus p.t.)

IN ADDITION TO THE STANDARD PACKS OF 200 AND 500 CAPSULES



A survey shows that the majority of initial prescriptions for COPROL and COPROLAX is for 20 capsules. For convenience in dispensing these initial prescriptions

packs of

20 COPROL CAPSULES

trade price 9/2 (plus p.t.)

and

20 COPROLAX CAPSULES

trade price 5/9 (plus p.t.)

are NOW AVAILABLE through your usual wholesaler

Samples and information on request from

Medical Information Dept., DUNSTER LABORATORIES LTD., ROCHDALE, LANCS.

1964/5 Atlas sales aids:



This space is for you-in which you may advertise anything else you like!*

Get this Free advertisement in your local newspaper!

Photoflash package deal you

It's an eight-inch, double-column advertisement — with half the space left blank for you to advertise anything else that you like! You can illustrate cameras, flashguns, accessories, or any of the other photographic products that you sell.

It's entirely up to you . . . but the



's free with every Atlas most important thing is that the advertisement is FREE.

> And you get the backing of large space Atlas advertisements appearing in leading photographic magazines.

> All you have to do is order the special package deal of six outers of Atlas Photoflash bulbs (through your usual wholesaler, if you wish). The order is made up of two outers of AGI Clear; two outers of Double-lite Blue; and one outer each of Type I Clear and AG1 Blue.

> Nothing could be simpler ... and you will also get FREE display material, including an illuminated window display unit, a window sticker and a space-saving counter dispenser.

*Except, of course, products directly competitive with those produced by Thorn Electrical Industries Ltd.

To atlas lighting limited, tho upper st. Martin's lane, lond I wish to take advantage of advertising offer and agree to order for the six outers as liste Photoflash bulbs. Please ask y Representative to call to arinsertion of the free advertisement	your free place and of Atlas rour Atlas range the
Signed:	
Company:	
Address:	gergangangile fire excess diseases) dibib

ATLAS LIGHTING LTD., THORN HOUSE, UPPER ST. MARTIN'S LANE, LONDON, W.C.2. A Subsidiary Company of British Lighting Industries Ltd.

TATE COME... & RAT BAITS GO

GOES ON SELLING

IF YOU'RE STOCKING **SOREXA ALREADY** YOU'LL KNOW WHY! IF YOU'RE NOT-THEN YOU OUGHT TO KNOW THAT:



SOREXA

is more than just a bait.

Its patented Attractant actually induces mass suicide! Rats can't resist it — they literally feed themselves to death!

CUSTOMERS

TRUST SOREXA.

They know it's safe, swift and sure. That's why it's the market leader.

SOREXA

GETS CONSISTENT

NATIONAL ADVERTISING **SUPPORT**

heavier another, even yet campaign, coming soon, will keep SOREXA continually in front of your customers.

SOREXA

is the original BRITISH Warfarin.

Its effectiveness has been proved beyond challenge over many years—many millions of times.

RETAILERS

—LIKE YOU—LIKE SOREXA

because its familiar square black pack stacks well and has customer confidence and recognition. Profit margins—always good—are now even better at 40%.

STOCK UP NOW!

From your usual supplier or direct from:

IIb DRUM 71b PACK 281b SACK 31b PACK selling at 3/6 selling at 8/selling at 16/selling at 48/-

SOREX (LONDON) LTD. TONBRIDGE ROAD, MAIDSTONE, KENT.

Extra Profit BONUS OFFERS from MENTHOLATUM



DEEP HEAT

3'9 size - 13 for 12: 5'9 & 7'9 sizes - 7 for 6

MENTHOLATUM BALM

1'- tins & 2'6 jars and tubes - 13 for 12

You get 5% discount on orders over £5 for settlement within 30 days. The bonus goods come to you TAX FREE. The whole of the selling price is extra profit to you.

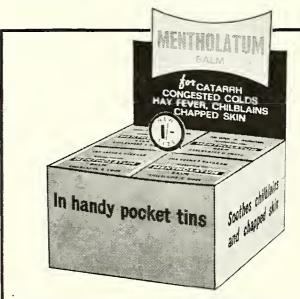
BIG SALES CAMPAIGN

More than 90% of the public will see Deep Heat advertising this winter through combined and intensive T.V. and Press promotion. Throughout the winter and spring, Deep Heat and Balm advertising will appear at least once a week in the leading daily and Sunday newspapers. No other products of this kind are promoted on such a scale.

NO RISK GUARANTEE

All Mentholatum products are sold on the understanding that any excess stock you order on this offer will be taken back for exchange or credit.

ORDER FROM YOUR
WHOLESALER TODAY!
OFFER CLOSES OCT. 31



NEW IMPULSE-SELL CONTAINER

1/- tins of Mentholatum Balm now come in a new type of container to stimulate fast offthe-counter sales. A striking showcard for Deep Heat is available on request.

THE MENTHOLATUM COMPANY LTD., SLOUGH, BUCKS. TEL: SLOUGH 23341





BENDS TO ANY ANGLE

Self-Service Display Carton holds packs of 25 Flex-Straws (for hot and cold liquids).

A boon to invalids at home. Children love them!



THE PLASTIC SEAMLESS DRINKING

Self-Service Display Carton holds 36 packs. Each "Sparkles" transparent pack embraces 50 gay, colourful "Sweethearts". "Sparkles" are not affected by alcoholic drinks—even when

Standard waxed paper straws in 50's and 100's. Ex. stock.

HYGIENIC DRINKING STRAWS CO. LTD. COLLEGE ROAD, FISHPONDS, BRISTOL

Telephone: Bristol 65-3268/65-4205 Telegrams: Drinkrite, Fishponds, Bristol



Farley's Infant Food Ltd

TORR LANE · PLYMOUTH

TELEPHONE PLYMOUTH 723S6
TELEGRAMS FARLEYS 723S6 PLYMOUTH
DIRECTORS N.R.TRAHAIR D.L.TRAHAIR J.R.TRAHAIR

To All Our Customers.

Gentlemen,

PRICE INCREASE FARLEY'S RUSKS

The general rise in manufacturing costs is known by everyone, but as far as possible we have held our prices.

However, the prices of raw materials have risen to such an extent that we are forced to increase the prices of Farley's Rusks.

This we regret, but we have no alternative. Therefore, we have to advise you that with effect from

MONDAY 21st SEPTEMBER 1964

the new prices of Farley's Rusks will be as follows:

LARGE SIZE PACKETS. PRICE TO TRADE 16/- per doz. (1 Doz. per Case). RETAIL PRICE 1/8d.per packet.

SMALL SIZE PACKETS. PRICE TO TRADE 8/5d per doz. (2 Doz. per Case). RETAIL PRICE 10 per packet.

Wholesale and cash discount terms remain unaltered.

The prices of Farley's Milk Food, Farley's Gluten Free Biscuits and FARLENE remain unaltered.

Yours faithfully, FARLEY'S IN ANT FOOD LUI

GENERAL SALES MANAGER

F



Manesty 'H' MIXER for dry or moist materials. 3 cubic feet capacity. Removable paddle, transparent plastic lid, safety guard.

Manesty '300' MIXER for dry or moist materials. 6 cubic feet capacity. Removable paddle, transparent plastic lid, safety guard.

Manesty **FITZMILL** for mixing, size reduction milling, emulsifying and dispersing.

Manesty **DRUM MIXER.** Interchangeable drums and removable paddle. Foot switch and adjustable rollers.



Halina

35mm CAMERAS



HALINA 35x

- f3.5/45mm hard coated 3 element lens
- 4-speed shutter 1/25-1/50-1/100-1/200th sec & B
- Synchronised for flash
- Double exposure prevention
- Coupled film transport and exposure counter
- Aperture setting from f3.5 to f16

£7-13-3 Ever Ready Case £1.8.1



HALINA PET 35mm

- Achromat 50mm lens
- Three apertures, Dull-Bright-Sunny
- Bulb & instantaneous shutter
- All metal with satin chrome trim
- Synchronised for flash
- Double exposure prevention

£4-19-6 Ever Ready Case £1.8.1



HALINA VICEROY

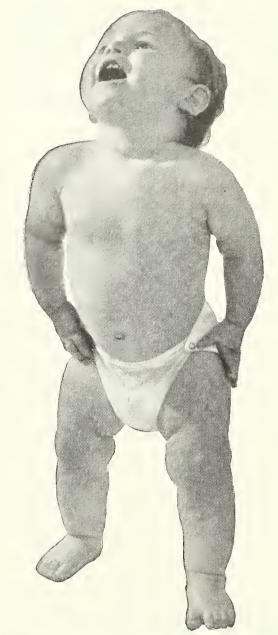
 $24'' \times 24''$ and 35mm

- Double Meniscus f8 lens
- Apertures f8, f11, f16
- Automatic focusing from 6ft
- Synchronised for flash
- Life size ground glass viewfinder
- Time exposure setting
- All metal body
- Complete with 35mm conversion unit

£3-19-6 Canvas carrying case 10/6d

sole distributors to the trade:

J. J. SILBER LTD., 11 Northburgh Street, London, E.C.1 Telephone: CLErkenwell 8031 (10 lines)



MODERN MOTHERS PREFER

PADDI pads

THE ORIGINAL · SOFTEST · BEST DISPOSABLE NAPPIES

Mothers know they can trust Paddi pads because of their unique construction. A layer of soft cotton wool is backed by a pad of cellulose wadding of surgical quality which rapidly soaks up the moisture and keeps baby's skin safe and dry. This actually helps to reduce the incidence of nappy rash too—and there is no chafing. No wonder Paddi pads are the largest selling disposable nappies on the market.

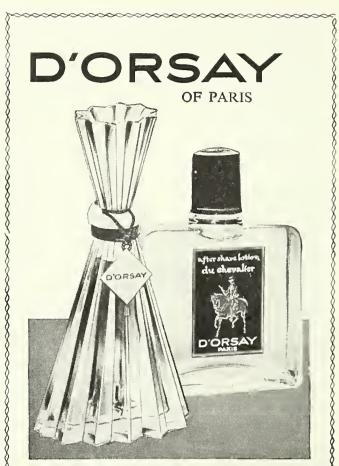
There's a well-aimed advertising campaign appearing in mass circulation Women's Magazines and specialist publications to increase sales still more.

Be sure of your share of this expanding market

STOCK, DISPLAY AND SELL PADDI pads also PADDI and PADDI-PILCH nappy holders

* SPECIAL RETAILER DISCOUNTS In addition to the usual profit margin you may obtain an extra discount of from $2\frac{1}{2}\%$ to 10% on your orders for PADDI products.

Ask for details NOW: ROBINSON & SONS LTD WHEAT BRIDGE MILLS · CHESTERFIELD · Tel. 2105 (11 lines)



ONE OF THE WORLD'S MOST EXCLUSIVE PERFUME HOUSES

launches an extensive Advertising Campaign on U.K. Market.



These and other advertisements will create fast, new sales by appearing in—



VOGUE · FLAIR · WOMAN & HOME · TATLER SUNDAY TIMES · ILLUSTRATED LONDON NEWS QUEEN · OBSERVER To be sure you profit from the certain demand that this advertising will create, carry the full range of D'ORSAY Perfumes and Toiletries.

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Volume 182

SEPTEMBER 19, 1964

No. 4414

Conference Week in Edinburgh

MEMBERS SIGN IN AND SESSIONS OPEN

PHARMACY'S own "Edinburgh Festival" opened amid civic welcomes and in an atmosphere of true Scottish hospitality—with a little white heather for luck—when the 101st meeting of the British Pharmaceutical Conference got off to a good start at Leith Town Hall on September 14.

Most of the Conference members had, of course, arrived the previous day.

Registration

Amongst earliest callers at the Pharmaceutical Society's House at 36 York Place, Edinburgh, where the Conference office was opened on Sunday, September 13, were a number of members who had travelled overnight. They included Mr. J. R. Phillips, Bournemouth, Hants, Mr. and Mrs. K. A. Lees, Greenford, Middlesex, and Miss M. A. Burr (a member of Council). A little later Dr. T. E. Wallis, London, arrived followed by Mr. H. Humphreys Jones.

A local and topical flavour was immediately imparted by the presentation to each lady—and some fortunate gentlemen—of a spray of white heather as they collected their Conference documents. Local pharmacists acted as couriers and guides, meeting visitors at

the station and at the airport office and taking them to their hotel, hall of residence, or the Conference office. There the lecture hall had been rearranged for its temporary change of function and coffee and tea were being dispensed continuously from 10 a.m. to 2 p.m.

continuously from 10 a.m. to 2 p.m.

Many visitors followed direction signs within the building guiding them to the basement to enter the reconstructed traditional-type pharmacy of late Victorian era that was installed there some time ago. There they were able to handle products mentioned in the collection of prescription books dating back to the year 1800. Other newcomers made their way to the new laboratories of the Department of Pharmaceutical Sciences where a small exhibition had been arranged of some of the work being carried out in the Department.

Amongst their Conference documents visitors found a coloured local-view postcard already stamped with one of

the new Forth Road Bridge threepenny stamps. There were also official guides to Edinburgh and St. Andrews, as well as a 12-page illustrated brochure entitled "York Place," giving historical details of the Society's Scottish head-quarters.

Religious Service

St. Giles' Cathedral, the High Kirk of Edinburgh, provided a historic setting for the first official event of Conference week—a religious service on Sunday evening. A congregation of about 500, comprising Conference members and regular worshippers, heard a recital by Mrs. Joyce Penny (soprano), Mrs. Isobel Watson (piano) and Miss Shana Gidney (flute) of the Christmas Cantata (Scarlatti) for soprano and piano, the Sonata in G Minor (Handel) for flute and keyboard, and the aria, the Blessed Virgin's Expostulation (Purcell). In the short religious service that followed, the lesson, from St. Paul's Epistle to the Romans, was read by Dr. W. Mitchell (president of the Conference). An address of welcome was given by Dr. H. H. Whitley (senior Minister of the High Kirk) who called upon pharmacists to act in their work with conviction but also with conscience.

Floodlighting

By special arrangement on Tuesday evening the Edinburgh Castle was floodlit "for the enjoyment of members."



PLATFORM PARTY AT OPENING SESSION

Early days at the Conference



ARRIVAL BY AIR: A large group of Conference members who came by air from London, some after having come on from the International Congress at Amsterdam, photographed on arrival at the B.E.A. terminus in George Street, Edinburgh.



DISCUSSION OVER COFFEE: Mr. J. R. Phillips, Bournemouth, discusses a point of interest in a Conference brochure with Mrs. E. F. Hersant and Mrs. J. C. Train (wives of one of the present and an immediate past general secretaries of the Conference).



VISITORS FROM WALES: Messrs, Lloyd Jones and H. Humphreys Jones arriving in Edinburgh by car, are greeted at the Society's Scottish Department in York Place, Edinburgh, by Mr. J. A. Myers (chief pharmacist, Edinburgh Royal Infirmary).

AN INTEREST IN COMMON: A group of Roman Catholic Conference members photographed with Father Ryland Whittaker, whom they met at an informal luncheon at Portobello, nr. Edinburgh, on Sunday. In the group are members from Dublin, Newcastle-on-Tyne, London and Glasgow,





BADGE RITUAL: Dr. T. E. Wallis (a former Conference chairman) pins the 1964 Conference badge on the lapel of his niece, Miss Margaret Wallis (secretary and treasurer of the Tunbridge Wells Branch of the Pharmaceutical Society).



AT WAVERLEY STATION: Mr. C. A. Johnson, who is in charge of the British Pharmacopæia Laboratory, is greeted on arrival from London at Waverley Station, Edinburgh, by Mr. E. C. M. Maxwell, Edinburgh (left).



CONFERENCE BADGE (Colours: Blue and white)



CONFERENCE CHAIRMAN AND OTHERS: Dr. Mitchell (Conference chairman) meets Conference members who attended the service at the High Kirk of St. Giles on Sunday evening. In the group are Mr. K. Gisborne, Miss D. M. Jones, Miss M. C. Islip, Dr. E. F. and Mrs. Hersant, Mrs. J. C. Train, Mr. E. Knott, Dr. Train and Mr. Patterson.



SENIOR MINISTER AND CHURCHGOERS: Dr. Harry G. Whitley (Senior Minister of the High Kirk of St. Giles) greets some of the pharmacists in his congregation before the Service commenced on Sunday evening.



LUCK ADDED TO CHARM: Miss M. A. Burr (a member of the Pharmaceutical Society's Council) receives from Mrs, G. H. Macmorran one of the sprigs of white heather which had been thoughtfully provided for all the lady visitors by the local organisers.



CLAN KENNELLY: Master Ciaran Kennelly, Mrs. Kennelly, Miss Deirdre Kennelly and Mr. Donal Kennelly (president of the Pharmaceutical Society of Ireland) with Father Ryland Whittaker, S.J., M.C., M.D., F.R.C.P.(Ed.), B.Sc., D.P.H., Edinburgh.



GENERAL VIEW OF THE AUDIENCE AT LEITH TOWN HALL FOR THE OPENING SESSION

Opening Session

THE 101st British Pharmaceutical Conference was opened by the president of the Pharmaceutical Society (Mr. C. W. MAPLETHORPE) in the Town Hall, Leith, on Monday morning. Mr. Maple-thorpe expressed his pleasure at the presence of Bailie Morgan, who was deputising for the Lord Provost of Edinburgh (absent abroad on business connected with the city) and at seeing again many visitors from overseas who he understood came from many Euro-pean countries, the United States, Canada, Australia, Nigeria, the Sudan, Kuwait, Nepal and Thailand. As president of the Pharmaceutical Society of Great Britain it was his honour, by tradition, to be also the president of the Conference. He had been doubly honoured because it was his second year in office. He had attended many Conferences and had always learned much that was new and valuable. He had also had the opportunity of renewing old friendships and making new ones. The Conference was an important occasion in the calendar year of pharmaceutical affairs and, because of the high standard of the papers presented, and the attendance of men eminent in their profession, it had always been markedly successful.

Speaking of pharmacy and pharmaceutical education in Edinburgh, he

said that pharmacy in the city had a special position because of the presence of the Pharmaceutical Society's Scottish office in York Place, from which the Society's Scottish affairs were conducted. In education the Heriot-Watt College had for many years held a prominent place in pharmaceutical education, and had achieved high standards. All hoped that at some future date the College would be given university status and that it would grant its own degrees in pharmacy.

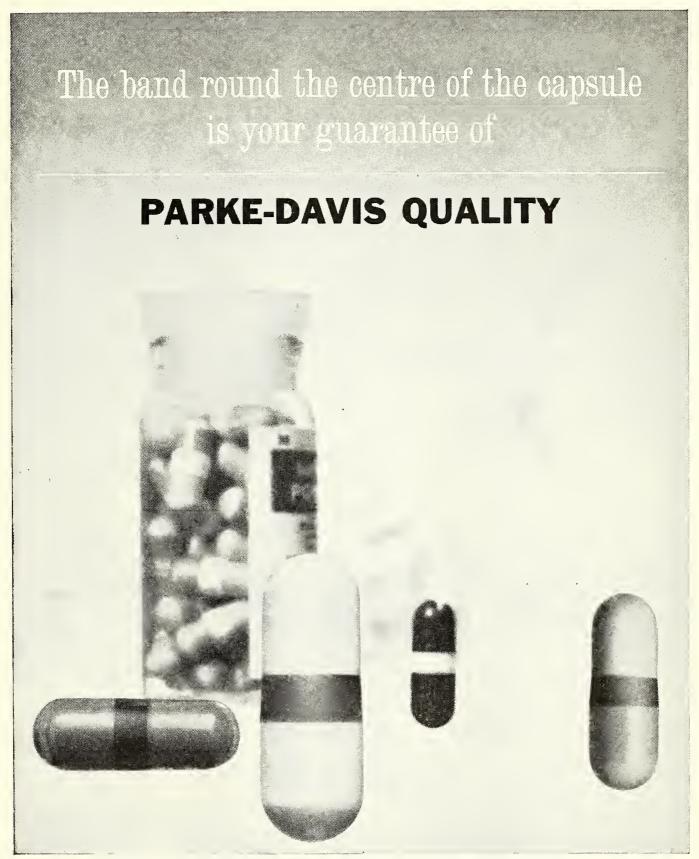
1938 Conference Recalled

The speaker recalled the previous Conference in Edinburgh in 1938, when the country was already under the shadow of war. This year the Conference met in much happier circumstances. Great developments were taking place in the city and everywhere the world was changing rapidly. But it was a national characteristic to cherish and keep alive the best of the old traditions. However rapid the erection of new buildings or the growth of scientific knowledge the best possible compromise must be reached between the old and the new. In achieving that objective there was no better example than the City of Edinburgh. He was sure that Conference visitors to the city would go away enchanted and feeling that they must return another time

BAILIE MORGAN said it was a privilege to extend a welcome to members of the Conference on behalf of the City of Edinburgh. There were many opportunities to welcome conferences to Edinburgh and some were of international standing. Though the present Conference was known as the British Pharmaceutical Conference it seemed to have an international flavour. The Bailie mentioned that the chairman of the Conference had been educated at Heriot-Watt College, and added that Edinburgh had always had a high regard for the sciences. He had been impressed by the scope and complexity of the science papers that were to be discussed at the Conference, but he thought he could not usefully contribute to them! It was a privilege to welcome Conference members to Edinburgh and he hoped it would be successful

MR. MAPLETHORPE thanked Bailie Morgan, as representing the Lord Provost of the city of Edinburgh, for his welcome and then handed over the further proceedings of the Conference to the chairmanship of Dr. W. Mitchell, who delivered his address "On a Sense of Proportion in Science" (p. 283).

At its conclusion MR. S. G. E. STE-VENS proposed a vote of thanks to Dr. Mitchell for the address he had given as Conference chairman.



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101st meeting of the British Pharmaceutical Conference, Edinburgh CONFERENCE CHAIRMAN'S ADDRESS

"On a Sense of Proportion in Science"

MY first contact with pharmaceutical science was towards the end of traditional, may one say classical, pharmacy, when crude drugs, and galenicals made from them, still held the main field, though pure alkaloids and their salts, some glycosides, insulin, and other active principles, all of natural origin, were in use. A limited number of synthetic organic chemicals, such as aspirin and phenobarbitone, had also been introduced. Then, in the mid 'thirties, came the successful introduction first of Prontosil rubrum and next of its active moiety, sulphanilamide. A whole series of improved analogues followed and, until the emergence of resistant strains of bacteria, notably of the gonococcus, it seemed that the millennium had arrived. After a few years, before troubles with bacterial resistance to the sulpha drugs had become important, another great advance was made with the successful introduction of penicillin into medicine, rapidly to be followed by streptomycin, chloramphenicol and a host of other antibiotics—again to be succeeded by the emergence of resistant strains of bacteria, resistance to streptomycin being particularly marked.

Another Millennium

While this was going on in medicine and pharmacy, a similar revolution occurred in pest control. DDT, a chemical that had been known for about 70 years, was found to be a potent and persistent poison to houseflies and to many other insect pests. Soon afterwards came the discovery that benzene hexachloride, another previously known chemical, was also a valuable insecticide; and various new chlorinated hydrocarbons with similar properties were introduced later. Again the millennium seemed to have arrived—until resistant strains of insects began to appear in significant numbers all over the world; and it soon became apparent that resistance to one of the chlorinated hydrocarbons was usually accompanied by cross resistance to the others.

More or less concurrently with those developments synthetic detergents, which have obvious advantages in use over traditional soap detergents, came on the market and rapidly became almost dominant. However, the vast usage of synthetic detergents rapidly created serious foaming problems in some rivers and practically all sewage works—problems that have yet to be satis-

factorily solved.

Similarly, in our food there has been, during the same period, a great increase in the use of synthetic emulsifiers, thickeners, flavours, preservatives and so on. Those, coupled with new methods of preparing, preserving and packing, have presented the consumer with all kinds of foodstuffs that are attractive in appearance and convenient to cook. or to eat without cooking.

Little wonder then, with all those exciting and rather wonderful developments going on, that some people got over-optimistic. One heard from organic chemists and others a great deal of



DR. WILLIAM MITCHELL

confident talk about "tailor-made molecules." So far as drugs are concerned such talk had arisen from some spectacular successes in certain limited classes: synthetic morphine substitutes was one, stilbæstrol was another. Unfortunately, the successes were few and the failures many, and today it is regrettably true that the results have proved less fruitful than had been

Only when we understand how a known drug acts on the living organism will research to produce superior synthetic drugs proceed to the best advantage. So far, research has aimed mostly at producing new drugs without fundamental information. That is understandable because a reasonably prompt financial return can be expected only from the discovery of new drugs themselves. The pharmaceutical industry has, therefore, tended to concentrate on a direct search for new drugs, leaving the even more expensive fundamental work to others who are usually ill-provided with money and equipment for their difficult tasks. I believe that it will be increasingly realised that greater gains may ultimately be attained by investing more heavily in fundamental studies of drug action than has so far been done.

Natural Products

One has also heard claims that natural products are outmoded. Yet some of the most significant recent advances have been with natural products.

There is, in my opinion, no a priori reason why a natural product, be it

drug, fertiliser or foodstuff should be harmless, and equally, no *a priori* reason why the reverse should apply to all synthetics.

During the past twenty years there has been a vocal section of chemists, pharmacists, pharmacologists, clinicians and pest controllers that has trumpeted the virtues of synthetic chemicals; that has seemed to think that "tailor-made" chemotherapy was a fact; that did, in fact, delude itself into thinking that the millennium had arrived. I have tried to be one of the others, possibly the minority, one of the "middle-of-the-roaders" who, in the light of our obvious ignorance of the action of chemicals on bodily function, have been appalled at the lack of humility of some of those people, at their excessive confidence, amounting occasionally even to recklessness. Drugs, insecticides, food additives have, in some cases, been rushed on to the market too quickly, and thereby applied on a relatively vast scale. One of the hazards of this modern age is, I believe, speed of communications. In the old days there was more time to assess the true value of things. A new product, natural or synthetic, was used locally perhaps for many years. If it proved successful for its purpose, and showed no adverse effects, its reputation would slowly spread. At one time the dissemination of such information possibly continued over scores of years or even over centuries. If there were serious adverse effects, the number of people so affected was relatively small and self-limiting. Gradually things have speeded limiting that today a pay discovery is up, until today a new discovery is known throughout the world within days, or even hours, of its announcement.

Placebos

One is also often told by the proponents of synthetic drugs that many of the older natural drugs were inert; that they were mere placebos. Even if that were sometimes true, perhaps it was not such a bad thing. If some of those drugs did have little curative effect, possibly they also had few harmful effects. One is not being cynical in asserting that faith is often an important factor in successful medical treatment. Belief in the treatment, quietly assisted by natural recovery, will often result in cure—perhaps in spite of the medicines administered. A bottle of a harmless and perhaps unpleasant-tasting mixture, even if ineffective in itself, can at the best be a panacea to the believer in the treatment. At the worst it probably does no harm. Can that always be said of some of today's remedies that have powerful, and not fully understood, pharmaceutical actions, the good often being accompanied by the bad—and the latter sometimes being recognised too belatedly?

Is the pendulum, having swung too far to one side, now tending to swing too far to the other? Reaction has been setting in during recent years in some quarters, particularly in the fields of human food and of pesticides, but latterly also in the medicinal field. It has been hastened by two notable happenings: the thalidomide disaster and the publication of the book "Silent Spring" by the late Rachel Carson in the United States of America. The book, ably written by an author with a scientific training, is a masterpiece of special pleading and false argument about the dangers of synthetic pesticides. Although there is no real evidence that any significant number of people has been harmed by the proper use of pesticides, it is difficult to prove the converse—and it is a fact that indiscriminate, or even reckless, use of certain insecticides has been made in some areas, though probably not in the United Kingdom.

Diminishing Returns

In the field of medicinal and drug research there are signs that the law of diminishing returns has been operating to the extent that, whereas annual national expenditure on industrial pharmaceutical research has progressively increased during recent years, the increase has slowed markedly during the past year or so. Several factors have contributed to this. One is the increasing cost of such research, costs being heightened by increasingly stringent (and very proper) Governmental requirements to establish the safety of each new drug. Another, already mentioned, is the relatively short "life" of many new drugs. Still another is the parsimonious attitude of Parliament, the Ministry of Health and the Treasury to pharmacy and to the pharmaceutical industry. Purchases of patented drugs for the National Health Service have been made from foreign firms that have done little or no research but have simply "pirated" processes for the manufacture of those drugs. The desire of pharmaceutical manufacturers to invest large sums of money in research can only be expected to diminish if they find others reaping much of the financial reward. The deliberate encouragement of the prescribing of un-branded "official" products also serves to discourage the research-minded manufacturer.

For those and other reasons it is surely not to be wondered at that more and more pharmaceutical manufacturers are now diversifying into fields other than those of pharmacy and medicine.

In the field of food additives, notably synthetic colours, emulsifiers and flavours, there are signs of dismay and panic action, fully backed by official-dom in some cases. The most wonderful ammunition is being provided to such people by some toxicologists, who feed suspect materials to test animals at a high percentage of their total diet. Not surprisingly the wretched animals may display adverse symptoms, often including the development of carcinomas. By analogy with accelerated storage tests, I call those "accelerated toxicity tests." Many of us know, to our cost,

how misleading accelerated storage tests can prove to be, and I believe that the same can apply to "accelerated toxicity tests." What do they prove in relation to the normal ingestion by humans of the test substance at the rate of a few parts per million, and probably not continuously at that? In my view they prove very little. A few years ago, on the basis of such animal tests, coumarin was condemned as a potent liver poison — I believe the dosage rate in some of the tests was as high as 0.5 per cent. of the total diet fed to the rats. As a result, the use of coumarin as a food flavour has been discontinued. Even the most enthusiastic eater of foods flavoured with coumarin probably consumed less of it in a lifetime than each unfortunate test rat did in a month. This example causes me to repeat my charge that "accelerated toxicity tests" can be misleading if not downright alarmist.

The toxicologists may argue that repeated minute doses of materials branded as toxic in "accelerated toxicity tests" may harm us in time. In answer to that claim, I say "Prove it"!

Tobacco Problem

Some of the very politicians who chill our blood with stories of the evils of drugs and pesticides keep rather quiet about tobacco, probably because it figures so largely in the fiscal system of most countries as a revenue raiser. And the mass of the public, avid for claims about harmful chemicals and pesticides in foods, closes its eyes and ears to what is claimed about cigarette smoking—simply because it wants to smoke cigarettes. There is no absolute proof that smoking cigarettes can cause cancer of the lung, but one cannot laugh off the fact that more than 23,000 people in the U.K. alone in 1962 died of that condition. That is over three times the number that died in road accidents in the same period. And there is considerable evidence, mainly statistical it must be admitted, that there is a causal relationship between cigarette smoking and bronchial carcinoma-far more evidence than there is to show that coumarin ever harmed our ice cream eaters or eosin our lipstick users.

If any medicinal chemical, or food additive, were even suspected of killing 23,000 people a year there would be a national panic.

All of which suggests to me that many people, even among those in science, are tending to lose their sense of proportion. Whereas we went through a phase of over-optimistic, even perhaps reckless, use of chemicals as drugs, pesticides and food additives, now we are in the throes of pessimism, almost of panic. And this, I submit, is the time to regain our sense of proportion and to revert to a "middle-of-the-road" policy.

In our own field, mistakes have been made, are being made, and doubtless will be made. But let us not forget the enormous advances that have also been made. Let us remember that tuberculosis and poliomyelitis, for example, have lost most of their terrors as a result of recent advances; that diphtheria has nearly disappeared from Bri-

tain; and that modern anæsthetics, curarising agents and antibiotics have made surgery vastly safer, and able to accomplish things thought impossible only a few years ago.

Let us remember the successes and remind others of them as forerunners of successes to come; and let us not allow ourselves, or others, to lose a sense of proportion about those important matters.

Scientific Education

I should like to conclude by saying something about scientific educationanother subject that seems to me to be getting out of proportion. We have been told for years that there is a world-wide shortage of trained scientists and technicians. We have been told that Great Britain has lagged woefully behind the U.S.A. and the U.S.S.R. in the numbers it is producing. The present climate of opinion is all in favour of doing something about it. We have new universities springing up in various parts of Britain. Colleges of technology and technical colleges have acquired university status, or are in the process of attaining it. We are promised a vast outpouring of science graduates and of scientific technicians in coming years. But do we really need them—or at least do we really need so many? I am one of those who has questioned whether there has ever been a real shortage of scientists in Britain, or whether the trouble is really that we have not used those available to the best advantage. I have no accurate figures but evidently a large number, both of pharmaceutical and other chemists, are employed as "technical representatives "-a far larger number as each year goes by. While some of those may be doing a very necessary job, I consider that many of the others could be more usefully employed in actual scientific work, leaving their present work to be conducted by non-gradu-ates who have received appropriate training by their companies. I maintain that a country permitting that extensive use of scientists-trained mainly at the expense of the taxpayer, mark you—cannot truthfully claim that it is short of scientists. Furthermore, can we claim that all, or most, of the others are being used to maximum advantage? How many scientists are performing tasks of an almost routine nature that could equally well be done by technicians under direction, or are performing tasks that are even unnecessary?

Further, what evidence is there of a large untapped reservoir of scientific talent in Britain? Some there may well be; but is it large? In any country, at any time, there are a small number of first-class brains, a relatively larger but still not enormous, number of secondclass brains, and so on down to ordinary levels. The first-class brains usually come to the top anyway and they usually choose what they want to do. If science succeeded in capturing more of them it could only be at the expense of other professions and occupations and it is arguable how far it is desirable to let that go. For increasingly important as science undoubtedly is in our modern economy, it is not, and never will be, the only important thing.

I fear that when we come to fill the increased number of university places being, or to be, provided it will be found that the replacements must be people, both students and teachers, of lower brain-power than in the past. And I would remind you that it is important that the teachers should be able to teach. The increase may well result in a general lowering of standards, and a vast amount of public money may thus be spent to poor advantage. Then there will be a risk that Gilbert's dictum—" when everybody's somebody then no one's anybody "—will increasingly apply to graduates. I believe it already does apply to many of those churned out in those countries that are held up to us as producing relatively more graduates than we have done. But up to now our graduates, generally speaking, have been of high calibre, and I for one would deplore any tendency to lower our university standards.

Some increase in our output of science graduates is certainly required, and there is undoubtedly a need for a greatly increased number of technicians; but those could be provided at a lower level than graduate status and with less expenditure of public money. I believe we should also make every effort to increase our output of technologists, particularly of chemical engineers, for that is where Great Britain has tended to fall behind in latter years.

I have great sympathy for the science students of today. They are being called upon to absorb more and ever more information to an extent that appals me. I consider that a halt will have to be called to this process sooner or later. Surely it would be better to train all students only up to a certain standard, say to pass degree level, and then to make them specialise in a chosen, and fairly narrow, field? As it is they are expected to attain a high standard in many detailed aspects of their chosen science, much of which they rapidly forget after graduation (as most of us have done). By which time, almost inevitably, they proceed to become specialists anyway. By these remarks 1 am not commending lower standards, but rather a rearrangement so that not too much effort is spent on "cramming."

A Dissenting Plea

I know that others have publicly expressed similar views, though they are in a minority in these days when education, and particularly scientific educa-tion, is becoming a "gimmick," and one with party political significance at that. Hence, I am glad to have this opportunity to add my voice to the small chorus of dissent and to plead for the exercise of an increased sense of proportion, not only in science, but also in scientific education and in university education in general.

Conference Lecture

Transplantation of Tissues and Organs

By PROFESSOR M. F. A. WOODRUFF, D.Sc., M.D., F.R.C.S.

[ABSTRACT]
THE study of transplants of tissues and organs has yielded information of fundamental biological importance, especially in the domain of immunology; at the same time it has led to practical developments in the surgery of replacement and in the treatment of patients suffering from auto-immune diseases. It has also contributed to our understanding of the behaviour of tumours and has suggested possible lines of approach

to the problem of forging immunological weapons which may one day be of value in the treatment of human can-

Immunology of Transplantation

Transplants are classified as autotransplants, homotransplants or heterotransplants, according to whether the tissue is transplanted from one part of the body to another in the same individual, from one individual to another of the same species (e.g., man to man) or from one individual to another of a different species (e.g., monkey to man). As a general rule, autotransplants of living tissue become established and survive permanently, provided the technique of operation is satisfactory and the transplant's nutritional and respiratory requirements can be satisfactorily met in its new site. Homotransplants generally behave for a few days, or even a week or two, very much like autotransplants, but thereafter are destroyed. Heterotransplants are usually destroyed even more quickly.

There are, fortunately, some impor-tant exceptions to the rule that homotransplants are destroyed. In the first place, homotransplants behave like ordinary transplants if the donor and host are identical twins or animals of the same sex belonging to a very closely inbred strain. Secondly, it has been shown that homotransplants of skin survive permanently in patients suffering from congenital agammaglobuli-

næmia, and they may survive longer than normal in patients with advanced cancer and various other disorders. Third, some tissues are able to survive for long periods even when the donor and host are quite unrelated and the latter is in no way abnormal. This is especially true of tissues like cartilage and cornea which have no blood vessels, and which may survive indefinitely provided that they remain avascular. Fourth, homotransplants of various tissues may survive indefinitely in various sites, for example the brain and the anterior chamber of the eye. Finally, it is possible to modify the host reaction by various experimental and therapeutic procedures and in this way to secure prolonged, and in some cases permanent, survival of homotransplants.

First Major Contribution

The first major contribution to our understanding of the mechanism by which homotransplants are normally destroyed came in 1943 from the joint discovery of a plastic surgeon, Mr. Gibson of Glasgow, and a biologist, Dr. Medawar, who is now Director of the National Institute for Medical Research, Mill Hill, London. They observed that, in a patient who received two successive homotransplants of skin from the same donor, the second transplant was destroyed more quickly than the first, and this led them to suggest that the process involved might be an immunological one. Further observa-tions have shown that this "second-set phenomenon" also occurs regularly in other species and with other tissues. If different donors are used, the second transplant may behave just like the first (although this is not necessarily the case): a transplant of one kind of tissue, however, typically sensitises the recipient so that he subsequently rejects a second transplant of a different kind of tissue from the same donor in an accelerated manner.

Confirmation of the immunological nature in the phenomenon of homotransplant destruction was provided when it was shown that the state of enhanced resistance evoked by a homotransplant could be transferred to another animal genetically similar to the recipient by means of cells from a lymph node draining the area in which the transplant was located.

Host Resistance

The survival of homotransplants may be prolonged by exposing the recipient to whole body irradiation prior to transplantation, treatment with drugs, or a combination of those methods.

Another approach is to attempt to make a prospective recipient specifically tolerant of transplants from a particular donor without abolishing his capacity to react to other antigens. The possibility of doing this was predicted in 1949 by Sir Macfarlane Burnet and his colleague Dr. Fenner. They pointed out that the body does not normally react immunologically against its own constituent tissues, and they were, therefore, led to postulate the development, at a very early stage of life, of a "self-recognition mechanism." They suggested further that, if foreign antigenic material were encountered before this self-recognition mechanism had developed, the same material, if encountered again later, would be treated as non-foreign.

An example of naturally developing specific immunological tolerance occurs when dizygotic twins happen to interchange blood-forming tissue during the time they spend together in utero, and in consequence go on manufacturing blood cells of two different kinds

throughout their life.

It was at first thought that, to produce tolerance, the initial cell injection had to be made during embryonic life; but in rats, injection shortly after birth has also been found effective in certain circumstances and it is now known that it is true also of mice and various other species. More recently, it has been found possible to induce a similar state of specific tolerance in adult animals by first exposing them to x-irradiation and then injecting cells or, under certain conditions, by injecting cells or cell extracts without prior irradiation.

Clinical Organ Transplantation

Interest today centres largely in transplantation of the kidney and I shall confine my remarks almost entirely to that subject. A few attempts (as yet unsuccessful) have been made to transplant the liver and the lung, and no doubt attempts will soon be made to transplant the heart.

The usc of renal transplants at the present time is, however, limited by a variety of factors. To begin with, there is the problem of procuring suitable transplants and having them available when required. So far as human kidneys are concerned, there are only three

possible sources: (a) patients from whom a kidney is being removed for therapeutic reasons; (b) living volun-

teers; and (c) cadavers.

Kidneys removed for therapeutic reasons are only very occasionally useful as transplants and therefore contribute little to a solution of this aspect of the problem. Kidneys from living volunteers raise difficult ethical questions such as risk to the donor. Cadaver kidneys suitable for grafting are difficult to obtain and many subjects are unsuitable on account of renal disease. To make matters still more difficult, the kidney deteriorates rapidly after death, and is unlikely to function satisfactorily if the period between the death of the patient and the restoration of the renal circulation after transplantation is more than about three hours.

Technique

The technique of transplanting a normal human kidney is now well established, and the operative mortality, considering how severely ill the recipients usually are, is surprisingly small if the patient is properly prepared. Success is limited, however, by the difficulty of preventing immunological rejection of the transplant and by the risk that the disease affecting the patient's own kidneys may develop later in the transplant.

If the donor and recipient are identical twins there is no risk of transplant rejection and there are some two dozen people round the world, including two treated in Edinburgh, who owe

their lives to that fact.

When there is no identical twin available, it is unlikely that a completely compatible donor will be found, but some donors may be relatively more compatible than others. The problem thus arises of how to choose the best if several are available, or more often how to determine whether a given donor is likely to be sufficiently compatible for the graft to survive for an acceptably long time with currently available methods of treatment.

One method, which has been widely used for want of anything obviously better, is to base the choice on red blood cell grouping and on the relationship between donor and recipient. There is some evidence that incompatibility in respect of the ABO blood group system is prejudicial to long survival of a transplant, though there is evidence that it does not necessarily preclude this. The significance of other red cell group systems in this context is still sub judice.

A test of a different kind has been proposed which consists in injecting lymphocytes from the patient intradermally into all available donors. These cells will in due course be rejected; but before this happens they themselves, being immunologically competent cells, may react against the tissues of the recipient and that reaction may be manifested by early inflammatory changes at the site of injection. The test has, however, certain disadvantages. It is obviously inapplicable to cadavers and in living volunteer donors there is some risk (admittedly small but not negligible) of hepatitis and possibly also other diseases being transmitted from the patient.

Depression of Immunological Response

The therapeutic procedures currently used to depress the immunological response to renal homotransplants are whole body irradiation and administration of drugs of various kinds (alkylating agents, antimetabolites and steroids), alone or in combination, supplemented sometimes by local irradiation of the spleen, thymus, transplant site or transplant, or surgical removal of the spleen or thymus.

Whole body irradiation alone has resulted in a few long-surviving transplants but if the dose is adequate to prevent rejection of the transplant it entails a grave risk of septicæmia or severe hæmorrhage. The risk of infection from outside can be greatly reduced by nursing the patient in a properly designed isolation unit, but there remains the danger of invasion of the blood stream by organisms from the patient's own alimentary or respira-

tory tract.
Chemotherapy alone, or combined with some form of local irradiation, or with a very small dose of whole body irradiation, appears to be much safer. It has the advantage that the treatment can be given over a long period of time and adjusted according to the state of the patient and of the transplant. A decrease in transplant function or the appearance of proteinuria, for example. may call for more intensive treatment. whereas increasing leucopenia and thrombocytopenia or general wasting may necessitate reducing the dose of the drug or even temporarily withdrawing it.

The procedure adopted in Edinburgh and in various other clinics is to use the antimetabolite drug azathioprine (Imuran), which is closely allied to 6-mercaptopurine as the basis of treatment, and to supplement this by administration of actinomycin C steroids if there is evidence of threatened rejection. One of our eleven cases (the last) died as the result of a technical error. Two have died after fifteen to sixteen months as the result of slow but relentless rejection which became

uncontrollable during the last few months of life. One patient is alive and well with completely normal renal function nineteen months after transplantation.

In the light of these results and those from other clinics, and allowing for the gradual improvement in results which has occurred recently, I think that, at the present time, the chance of a kidney transplant from a living related donor who is compatible with the recipient in respect of the ABO blood groups surviving for at least a year are approximately 50 per cent. The chances that the transplant will survive for many years are harder to estimate, but are probably in the region of 10 per

Future Developments

How can these results be improved? In my view, the approach which seems most promising is to try to make the patient specifically tolerant of the tissues of the propspective donor by the injection of antigenic extracts, combined with the administration of immuno-suppressive drugs, before the

kidney is transplanted.

You will notice that I have used the term immuno-suppressive drugs. Most of the drugs we now use for this purpose were developed for the chemotherapy of cancer. Fortunately the pharmaceutical industry is beginning to realise that the capacity to suppress immunological reactions and to inhibit tumours do not necessarily go hand in hand and that the search for efficient immuno-suppressive drugs is worthwhile in its own right. This is welcome news to all of us who work in the field of transplantation and augurs well for the future.

Professor Woodruff elaborated on his paper presenting many slides giving case histories, drafts and details of patients. After the lecture, Dr. MITCHELL said that he had been fascinated by the wonderful lecture and by the way Professor Woodruff had treated his intricate subject. Professor S. D. Wright, Sydney, Australia, proposing the vote of thanks, said he was honoured to have been asked because he was only a visitor to the Conference and because of the importance of the work described. He felt sure that someone experienced in the work described by Professor Woodruff could pay a very worthy tribute. The speaker had shown clearly how important it was to bridge scientific disciplines in the cause of progress. In his work certain knowledge and mani-pulative skill of the surgeon had to be accompanied by the application of scientific principles gained from immunology, microbiology, biochemistry, genetics, radiation physics and chemotherapy. Progress in science must be measured in half human-life spans, and one had only to think back thirty years or so to remember that blood transfusions were just beginning to be accepted as having comparatively few hazards. The future could only be predicted from facts gained by past experience. Professor Wright said experience. Professor Wright said "Today we have heard a clear explanation of the path which lies ahead in this branch of medical science. . . .

101st meeting of the British Pharmaceutical Conference, Edinburgh FIRST PROFESSIONAL SESSION

Pharmaceutical Problems of Self-medication

By G. R. BOYES, B.Sc., F.P.S., F.R.I.C., L.M.S.S.A.

[ABSTRACT] THE urge to self-medication is deeprooted in many people who seek to diagnose and treat their own ailments without professional medical assistance, in spite of the facilities for skilled advice and treatment offered by the National Health Service. The urge to self-medication may be justified in the individual's mind by fear of embarrassment at the prospect of a consultation, by disappointment at the result of previous orthodox medical territory. of previous orthodox medical treat-ment, or simply because it is more convenient to purchase a pre-packed medicine than to spend valuable time in a doctor's waiting room. In many cases the patient will have been in-fluenced in his thinking by the advertisements for the particular proprietary medicine he decides to purchase. It may be asked, would people consult a doctor more frequently if medicines were not advertised at all? With everincreasing attention to education on health matters it might be thought that self-medication would by now have disappeared. That that is not the case is well known to all pharmacists.

"According to the Financial Times (quoted by the Practitioner) we spend £24 million a year on our 'coughs and sneezes' alone," and according to the Director of the Office of Health Economics (Mr. G. Teeling-Smith) about omics (Mr. G. Teeling-Smith), about £60 millions a year is spent on pharmaceutical and para-medical supplies, apart from prescription goods. Pro-bably less than two-thirds of this goes on antacids, analgesics, cough mixtures, laxatives, ointments, and other medicines; the remainder covers everything

from tonic wines to slimming foods.

The practice of self-medication arouses mixed feelings among members of the medical profession. By some, it is strongly resented, by others it is condoned. Those who object to it argue that it leads to delay in the correct diagnosis of the cause of illness, and that the so-called remedies used by the lay patient may do considerable harm. On the other hand, there are those who feel that, within reason, the advantages of self-medication probably outweigh its disadvantages.

Permanent Harm Unlikely

Provided that the self-treatment of illness is limited to minor disorders, first-aid in cuts and bruises, temporary dressings for burns, and simple analgesia for relief of pain, and provided, too, that skilled medical advice and attention is sought if the disorder continues, it is unlikely that any permanent harm can result. But those are two important provisos, and when they are observed little difficulty arises, Beyond this restricted sphere the desirability or otherwise of self-medication is a

sociological problem which can be resolved only by education. In the meantime we pharmacists cannot absolve ourselves from responsibility for the effects, good or bad, of the use or misuse of self-medication on the health of the community when the materials for that medication have been purchased from us.

The pharmacist in general practice has a dual rôle to perform in regard to the supply of medicines to the pub-



Dr. G. R. BOYES

lic. First, he is the only authorised supplier of medicines ordered for a patient on a doctor's prescription—a function for which he is fully equipped by training and education. Secondly, he is a vendor—albeit, not the only vendor—of drugs and medicines used by the patients for self-medication. It is my intention to invite you to consider the pharmacist's responsibility to the public with regard to the second of those functions. Let us start, therefore, by considering the comments by the Society's Council on the report of the Committee on the General Practice of Pharmacy in so far as it relates to the counter sale of medicines. I quote from paragraph 11:

"The implication that counter sales of medicines do not involve professional considerations would not be accepted by any responsible pharmacist, However, unless these considerations are sufficiently in evidence it is clear as shown, for example, in the judgment in the Chemists' Federation case, the pharmacist's status in relation to such sales is, to say the least, ambiguous."

And, again in paragraph 16:

"The only basis on which the general practice of pharmacy can claim a distinctive position is that the pharmacist recognises (1) that he must not only know how to prepare medicines, but also be thoroughly acquainted with their properties and the circumstances in which they may be safely and effectively used . . .; (2) that this knowledge must be applied

primarily in the public interest, that is to say, the general practice of pharmacy is a professional activity concerned with supplying the medicinal needs of the general public in whatever form these supplies may take. In this context the distinction between dispensing and counter sales in principle disappears. The same considerations apply to them both, namely, that the right medicine should be supplied in the right form with the right place."

The Four "Rights"

How are those considerations to be observed in regard to the counter sales of medicines requested by the public? The right medicine is, presumably, the medicine asked for by the customer, but if the customer has asked for advice about the prevention or treatment of a particular ailment, then the right medicine must surely mean the correct one for that purpose.

The right safeguards. It is here that the pharmacist must use his knowledge of the action and side effects of drugs and, by calling attention to potential dangers and to conditions of storage necessary to ensure stability of the medicine, stand as a barrier between the public and the unwise use

of drugs.

The right place. The professional knowledge and judgment of the pharmacist cannot become fully effective in protecting the general public from the hazards of self-medication until the sale of all medicines is reserved to pharmacy. The implications for pharmacy of the method of marketing known as "self-service," whereby the customer has direct access to goods without reference to anyone except a person acting as cashier, was the subject of a condemnatory statement by the Council of the Pharmaceutical Society. We would all want to see this injunction carried much further, to the point when medicines are not offered for self-selection anywhere.

The right time. If further restrictions are placed on the number and nature of medicines which may be sold at places other than pharmacies, it will be necessary to consider whether there will be a sufficient number of points of distribution to cover the needs, real or imaginary, of the public for medicines, and whether it will be necessary to make arrangements for the supply of such medicines outside normal business hours. Proprietary medicines, like prescribed medicines, are often required for immediate use.

In any pharmacy where a personal touch is maintained, the advice of the pharmacist is sought on a variety of problems connected with health, personal hygiene and preventive medicine.

sonal hygiene and preventive medicine.
In dealing with this type of inquiry,
pharmacists who desire to accept the

rôle of adviser on health matters to the local community must gain the confidence of the general public, but they must also be at pains not to usurp the function of the medical practitioner. Only by working in the closest harmony with doctors and referring all apparently serious disorders to them can pharmacists hope to have their intervention in the doctor-patient relationship accepted by their medical colleagues.

Some Typical Inquiries

Now let us consider how pharmacists should deal with some of the problems presented by those who practise selfmedication. A pharmacist should have no doubt about his answers to questions such as these:

(1) A customer requests one of the advertised remedies, or asks for a B.P. or B.P.C. preparation. The sale must be made only in such circumstances that any question in doubt can at once be referred to a pharmacist. It must not be completed on the uncontrolled responsibility of an untrained counterhand.

(2) A customer asks, "Do you recommend this?" The question can be answered only on the factual knowledge of the composition of the medicine and of its properties. If the preparation is on display in the pharmacy. it is not possible to avoid some implication that the claim made for its medicinal properties have the personal support and recommendation of the pharmacist.

(3) A customer says, "Can you recommend me something for my indigestion?" The pharmacist has a The pharmacist has a choice to make. He can offer a packed proprietary remedy either of his own or of someone else's manufacture. He can ask whether he can make up something for the customer. In such circumstances he cannot avoid inquiring carefully into the duration of the symptoms and what, if anything, has been taken before, so that he can decide whether to advise the patient to consult a doctor, or himself accept the responsibility of treating the symptoms.

If a pharmacist knows that a customer is regularly and frequently purchasing large quantities of, shall we sav. chlorodyne. compound codeine tablets, Gee's linctus, surgical spirit, phenacetin tablets or some other medicine that has been known to lead to habituation or addiction, does he offer a word of caution and advice, does he refuse a sale, or does he leave a potential drug addict to his own destruction?

If a customer regularly purchases supplies of some iron - containing "hlood-tonic," does the pharmacist ever ask if the preparation is being taken on medical advice, and if it is not, does he suggest that a proper diagnosis might result in more effective treatment and a speedier recovery? Should a pharmacist sell without prescription compounded preparations containing cyanocobalamin or folic acid for oral administration, or should he offer a caution that the use of such preparations is likely to impede a doctor in diagnosing an anæmic state?

Here let me refer to that excellent

paper on the "professional responsibilities of the pharmacist in the supply of medicinal substances," given by C. G. Drummond to the Second Professional Session of the British Pharmaceutical Conference at Bournemouth in 1960. Mr. Drummond's question: "Should a pharmacist sell?" is particularly apt in relation to the situations I have depicted. "Does he, without questioning his conscience, sell anything at all that advertising sends his way, regardless of its price or its therapeutic effects? Does he feel that the matter is one to be decided entirely by the purchaser, and that it is none of his affair?" "There must come a time," said Drummond, "when the individual's conscience rebels and he decides flatly that there are some things he cannot do and some articles he cannot bring himself to sell, regardless of economic pressure. . . . " "No pharmacist with a keen sense of professional responsibility and professional dignity wants to have the exclusive right to sell worthless rubbish."

The pharmacist who responds to a request for medical advice must use his experience and wisdom to decide whether it is in the patient's interest to delay a visit to a doctor for full examination and advice. A pharmacist cannot presume to diagnose, but he should be aware of the dangers of neglecting to secure specific treatment for a serious malady.

Counter Prescribing

The extent to which pharmacists ought to engage in "counter prescribing" is a matter of controversy within the ranks of pharmacy. On the one hand we have been told that counter prescribing is of great service to the public; on the other, that any pharmacist who prescribes for, and treats, an ailment as diagnosed by the customer at the counter is in no way different from the quack.

In a paper contributed to a professional session of the British Pharmaceutical Conference at Bournemouth in 1960 Professor A. D. Macdonald

Today he [the pharmacist] is not expected to treat even superficial conditions such as can occur on the skin, far less to treat, say, wax in the ear or venereal disease. . . When the pharmacist counter prescribes, he is like the goal-keeper who thinks he would like to take a turn and try to score; he is forgetting his place in the team; he is letting the side down, and dangerously."

There are many limitations on the drugs that a pharmacist may prescribe and on the diseases for which he may offer advice. The total effect of this legislative restriction is that the selfmedicator and his aiders and abetters the proprietary medicine manufacturers and the counter prescribers have only a limited range of medicaments from which to select their remedies. It should not be concluded that the tools which remain to them are as harmless and innocuous as their omission from legislative control might lead one to imagine. Indeed, there are many dangers from which the public ought to be protected. That protection is necessary in regard to all medicines -not merely those which can be sold only by pharmacists.

Undoubtedly a great deal of self-medication is prompted by the mass advertising of proprietary medicines in the national Press and on commercial television. That the claims made in such advertising should be subject to stringent censorship and control has always been a policy that has been advocated by the Pharmaceutical Society.

A positive course of action was advocated by Sir Hugh Linstead in an address to the Portsmouth and District Branch of the Society when he said: The State should be responsible for verifying the accuracy of claims and statements made in advertisements for

medicines.

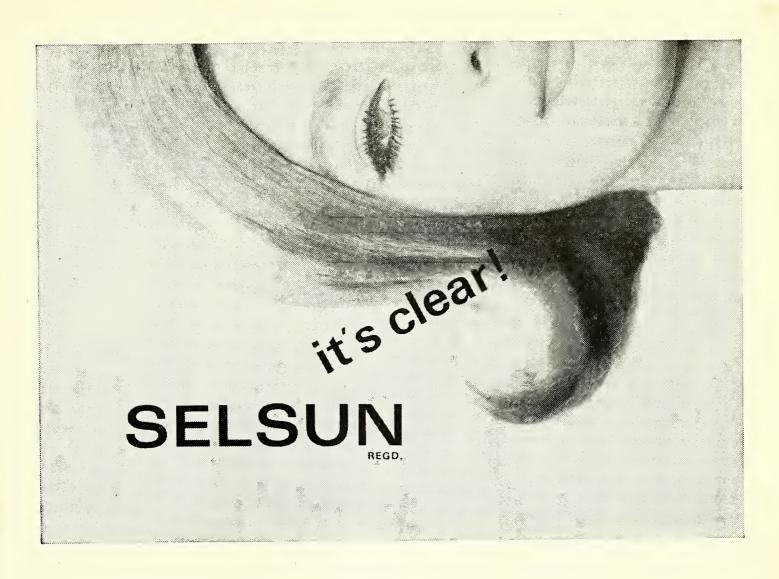
Unless and until State censorship comes about is there not an obvious need for some definite guidance on what to stock and sell and what not to sell? In fact this view was ex-pressed at a National Pharmaceutical Union area meeting in London in May 1964 by a pharmacist who said that guidance was needed on what not to sell. If this information related to proprietary preparations, would the issue of a "black list" involve difficulties under the Restrictive Practices Act or expose the publishers of such a list to the possibility of legal prosecution for libel? Would the issue of a "white list" of preparations approved and accredited by an expert committee, something on the lines of the Standing Joint Committee on the Classification of Proprietary Preparations—the Cohen Committee as it is usually called-but related to over-thecounter proprietaries, be more satisfactory? A resolution passed at the meeting of the Pharmaceutical Society's Branch Representatives in May 1964 expressed the opinion that pharmacists should not recommend ducts for which false or misleading advertising claims are made and that the Council of the Society should publish a list of such products.

The Statement upon Matters of Professional Conduct, clause 18, states that articles or preparations which in the opinion of the Council should be supplied only to or on the prescription of a medical practitioner, dentist or veterinary surgeon or practitioner should not be supplied otherwise after due notice has been given." a strong feeling among many pharmacists that something more than advice from our Council is needed. Those who take this view consider that "Thou shalt not" should replace "You should and be enforceable as a matter of professional conduct. breach of which would render the offender liable to be summoned before the Statutory

Committee.

Toxic Hazards

A pharmacist's knowledge of the side-effects of drugs must be used to warn against the occasional reaction from a normal dose given for a recognised therapeutic indication, as well as against the more insidious hut usually more serious effects of habituation and prolonged medication. The importance of drug-interaction is only just beginning to be recognised and is still imperfectly understood, but sufficient is

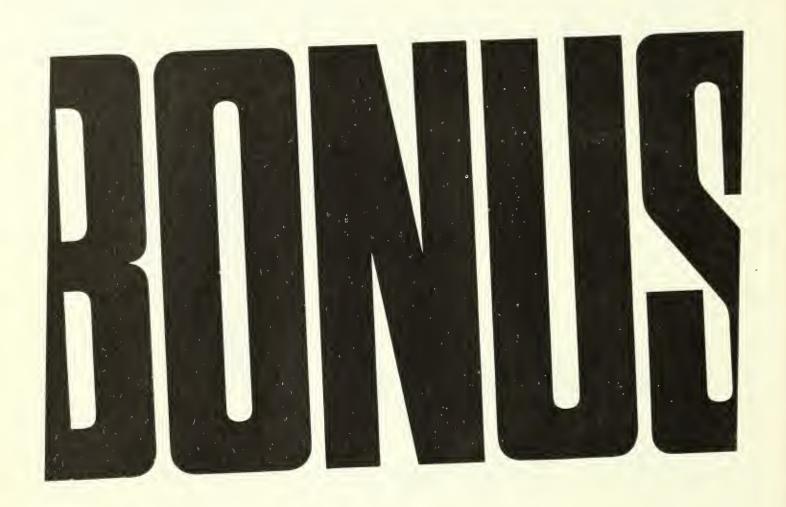


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known of possible dangers to make it imperative that a patient who is being treated by a doctor for any illness should not take any other medicine at all without the doctor's consent.

Over-enthusiastic use of supposedly harmless preparations has provided some unfortunate fatalities. For instance, the application of excessive amounts of glycerin of borax to an infant's mouth for the treatment of thrush with a fatal result, made it necessary to issue a warning that such preparations must be used sparingly. Similarly, the amount of boric acid in the official ointment and dusting powders was reduced because of deaths caused by the absorption of toxic doses of the acid from large open wounds. Some ten years ago, when it was discovered that many infants fed on vitamin-D-fortified dried milks appeared to be receiving more of this vitamin than was good for them, and were in fact suffering from infantile hypercalcæmia, a reduction was made in the main sources of this vitamin given to infants.

Vitamin D has recently again provided a pharmaceutical problem of considerable importance. The mother of a boy of six was advised at a child welfare clinic to give him extra vitamin D, because he was observed to be slightly knock-kneed. Without further reference to any doctor, she called at her local pharmacy and was given for this purpose calciferol tablets B.P., of which she gave one a day to her son for nine months. He developed bed-wetting and an intractable thirst, and was suffering from hypercalcæmia and diabetes insipidus. Calciferol tab-lets B.P. each contain 1.25 mgm. (50,000 units), and are intended to be used for the treatment of hypoparathyroidism. A much weaker preparation —calcium and vitamin D tablets B.P.C. which contain only 0.0125 mgm. (500 units)—should have been supplied.

Aspirin and Phenacetin

The dangers attending the longeontinued use of analgesic preparations,
particularly those containing aspirin
and phenacetin, are not sufficiently wellknown to the public or to non-pharmaceutical vendors. The fact that aspirin is freely available to the public
from many non-pharmaceutical sources,
including automatic coin-operated
machines, creates the impression that it
is a harmless substance. This is far
from the truth; aspirin is responsible
for many deaths by accidental or
suicidal poisoning. There is every
justification, in the public interest, to
seek legislation to restrict the sale of
aspirin to pharmaceutical channels.

The toxic effect of phenacetin —damage to the kidney, often with fatal results, in persons who have taken as much as 1 or 2 gm. daily as long as ten or twenty years—is now believed to be associated with the presence of an impurity produced during manufacture. Prior to 1940, phenacetin was made from 4-nitrophenol, but since then it has been made from 4-nitrochlorbenzol. As a result, traces of 4-chloracetanilide may be present in commercial samples of phenacetin and

this is presumed to be the toxic substance. The British Pharmacopæia 1963 has a limit test for 4-chloracetanilide. Is it a fair assumption that by thus limiting the permissible amount of this impurity, the toxic hazard has been removed?

I have not attempted to assess the extent to which self-medication is practised by the community. An interesting slant on this aspect of the subject is contained in the booklet "New Frontiers in Health" recently published by the Office of Health Economics. In a study conducted in a Hertfordshire housing estate during 1954-55; by the Public Health Department of the London School of Hygiene and Tropical Medicine, it was found that two-thirds of those interviewed had treated themselves with non-prescribed medicines (antacids, aspirin, cough mixtures and liniments) during a four-week period, compared with about a quarter who had taken prescribed medicines.

In Other Countries

One of the few detailed studies on the abuse of drugs was made in Denmark at the Bispebjerg Hospital, Copenhagen, in 1959. Records were kept of the number of patients admitted as a result of diseases caused by drugs. The patients were divided into two groups—those suffering from the abuse of drugs, and those suffering from side-effects of drugs given in correct dosage for proper indications. As regards numbers, abuse of drugs was the second cause of admission to the medical wards, being surpassed only by coronary thrombosis. Abuse of drugs accounted for 6 per cent. of admissions; side-effects of properly given drugs accounted for only a fraction of this.

Current regulations of the American Food and Drug Administration provide that a new proprietary drug product cannot be released for sale without proof of its safety and effectiveness, based on properly controlled clinical trials. The use of proprietary medications is limited to those conditions which can be effectively and safely self-diagnosed and treated by the layman. The conditions which fall within those limits have the following characteristics: (a) they are of minor severity; (b) they tend to be self-limiting or subject spontaneous remission; (c) they manifest themselves for the most part by subjective symptoms rather than objective signs; (d) treatment is limited to providing symptomatic relief rather than cure.

Dukes has published an informative review of the whole subject of the legislation relating to self-medication and the sale of medicaments at non-pharmaceutical points of distribution, with particular reference to the Netherlands. He reaches the conclusion that it is not possible to restrict the sale of the simplest packaged medicines to pharmacies. This conclusion is in accordance with the present practice in many countries, such as the Netherlands, U.S.A., Switzerland, East and West Germany and Great Britain, where non-professional retailers sell certain remedies, Even in those countries where pharmacy-only sales is the

acknowledged rule, exceptions are to be found.

In Italy, specific products can be released for non-professional sale; in Sweden, simple remedies are finding their place in supermarkets, and, in Belgium, despite a formally rigid prohibition in law, analgesics and antacids are among the products to be found in grocery stores.

Conclusions

On the general question of how we should deal with counter-sales of medicines, there is, in my view, no justification for a pharmacist to adopt an unrestrained commercial attitude, bent on making all the profit he can from every opportunity advertising sends him. He must be willing and able to guide the public in the wise use of medicine and this will often necessitate refusing a sale. A pharmacist whose sole concern is financial gain is not exercising his knowledge and professional ability to the benefit of the public and is certainly not pro-viding any justification for restricting the sale of all medicines to pharmaceutical channels. It is not relevant to this problem to ask: "If I refuse this sale and that sale, who will pay my rent?" It is relevant to attempt to instruct the public that medicines are no ordinary commodities to be purchased and consumed on the whim of the moment, but that all effective medicines when taken in excess, or for wrong indications, are potentially harmful. There is no such thing as a safe drug. We must use every opportunity to dispel an irresponsible attitude towards medicine, and to replace it by the knowledge that all medicines must be used with discrimination. In attempting to do this we are hampered by the public advertising of proprietary and branded medicines. Much of this advertising, despite the strenuous, well-intentioned efforts of the compilers of codes of standards, and despite the vigilance of censoring panels, still encourages self-diagnosis and an indifferent attitude towards self-medication. The status of the pharmaeist in the public estimation will always be judged by the nature of the medicines and of the advertising material he displays on his premises, and by the replies which he gives to questions on health matters posed by his customers. A pharmacist cannot discharge those functions while he is pre-occupied with problems in the dispensary. He must be in contact with his customers at the point of sale that is at the front shop counter where he can be seen and his advice can be sought.

Here we might consider the pilot trial scheme just concluded by the American Pharmaceutical Association with the co-operation of the United States Public Health Service, to determine the extent to which community pharmacists function as sources of reliable health information. Some thirty national professional and voluntary health organisations have contributed leaflets and brochures dealing with major chronic diseases of concern to the American public. Those have been displayed and distributed free of charge

in 360 randomly selected pharmacies throughout America. It was estimated that in one year about five million pieces of health literature have been distributed to pharmacy customers. The final analysis of the results will indicate whether the scheme can usefully be extended to include all pharmacies in the country.

Many pharmacists in Great Britain are able to interest their customers in the Family Doctor booklets, covering such subjects as the common ailments of babies, bronchitis, asthma, diabetes, infectious diseases of childhood, peptic ulcer, threadworm, dandruff and heartdisease.

No Prerogative

To those pharmacists who proclaim their prerogative to prescribe medicines I would suggest that their pharmaceutical education and examination does not equip them to do so. The newly registered pharmaceutical chemist is well-informed about the physical and chemical properties of the materials used in compounding and dispensing,

Civic Reception

MEMBERS of Conference were welcomed to the city at an official recep-tion given by Edinburgh magistrates and Town Council in the Assembly Rooms, George Street, on Monday evening. The rooms are a timehonoured social centre, and it was there, 150 years ago, that Walter Scott revealed the authorship of the Waverley novels.

As the guests entered they were received by the Magistrates and Council wearing their red robes of office, and flanked by the City Halberdiers in their sixteenth-century uniforms and carrying ancient halberds. Bailie Norman Macqueen, the senior Magistrate, deputised for the Lord Provost, who was in Spain. Bailie Macqueen said, on behalf of the Lord Provost, Council and the



CAUGHT IN THE RAIN: Two excursionists who had to take shelter during the visit to Hopetoun House on Monday.

and the precautions to be taken to minimise deterioration on storage. He has had a lot of instruction about the normal physiological functioning of the human body and how those functions can be modified by the action of drugs. He has been instructed in elementary toxicology and the principles involved in the treatment of poisoning, and he has learned about the use and abuse of antibiotics. All this makes him aware of the potential dangers of the materials he dispenses and supplies, and qualifies him to advise physicians on dosage, relative potency and degrees of activity of drugs. The newly registered pharmacist starts his career in general practice fully equipped for the responsibilities of the dispensing bench. Is he equally well equipped to deal with the type of problems I have discussed as commonly arising at the front counter? His instruction in pharmacy law has taught him what substances he may not sell without prescription. His knowledge of pharma-cology and toxicology enables him to judge the potential hazards to which

sclf-mcdicators expose themselves. He is in no way equipped to detect the causes of disordered body functions or to interpret the signs and symptoms of discase, for which the necessary skill and knowledge can be acquired only at the bedside and in the clinic. person who has not had training in medical diagnosis and therapeutics is not qualified to prescribe medicines for the treatment of illness, and a pharmacist is unwise if he does more than offer advice for the temporary relief of the symptoms of minor ailments.

I do not overlook the fact that the purpose of the pharmacist's work is to prevent or relieve suffering from illhealth, but in this respect the service rendered by the pharmacist must always be complementary to that given by medical practitioners. The pharmacist must be able to prevent ill consequences to the public from the lack of knowledge, the negligence or the folly of persons who have need of or desire to obtain pharmaceutical products whether for their own or some other person's use.

Conference Events

people of Edinburgh, that he extended a warm welcome to the Conference. The City was one which liked to be visited, and they were very happy to welcome conferences of all kinds. He hoped they would have a pleasant evening.

WILLIAM MITCHELL replied that it was his pleasant duty, as chairman of the Conference, to thank the Council for their warm welcome and delightful reception. The last Pharmaceutical Conference to be held in Edinburgh had been in 1938. It had been a great success, and they all hoped the success of the present Conference would be even greater. The City Council had given their local reception committee great help, and for that also the Council had their cordial thanks.

Supper was served and the guests danced to the music of Cam Robbie's band. Much enthusiasm greeted a colourful display by members of the Scottish Country Dance Society.

Excursion to St. Andrews

Few who boarded the two excursion trains at Edinburgh on Tuesday can have anticipated fully the afternoon of interest that was before them. Raincoats were needed at the beginning of the day, making prospects gloomy if not black. But the journey had no sooner begun than the first glimpses of the sun were caught, glimpses that came more frequently as the day wore on until any optimist who had had the foresight to pack a pair of sun-glasses found himself well rewarded.

The two trains (destination the university town and holiday resort of St. Andrews on the East coast above the Firth of Forth) travelled out and returned each by a different route. On the outward journey a cold lunch of chicken, ham and tongue was served, but at least as much time seemed to be spent in looking from the windows as in eating. Both routes started out across the Forth railway bridge from which grand-stand views of the newly

opened road bridge were afforded, causing cameras to be brought out for the first time. After passing through the industrial towns of Inverkeithing, Aberdour (from where the island of Inchkeith was clearly seen) and Kirk-caldy, the routes divided at Thornton Junction. The coastal route now left the highly populated areas, favouring instead the small town resorts and fishing villages of Leven, Lundin Links, Largo (the birthplace of Alexander Selkirk upon whose life was based Defoe's "Robinson Crusoe"), Kilconquhar, Elie, St. Monance, Pittenweem, Anstruther and Crail. For much of that part of the journey, the single-line track seemed to run almost on the beach.

About two-and-a-half hours were allowed for looking around St. Andrews
—hardly sufficient for the connoiseur of the antique, for the town is full of history. The ruined castle, dating from 1200, the cathedral, founded in 1160, and the university's colleges were each visited in turn by some. The more energetic climbed the tower of St. Regulus' Church for the views. Others occupied part of their time in combing for curios the shops in the town's wide streets and narrow "wynds." For many the day will have been made by a visit to the pharmacy of Mr. A. W. Keith. Attention was first attracted to it by a corner window depicting, in honour of the Conference visitors, "Pharmacy Through the Ages." Any description of the prize display is inadequate to present a proper picture of its content, which was so varied. Beside modern "ethicals" were a script book of 1855-56, jars, drawings, prints, crude drugs, and—most unexpected—nux vomica and erythroxlyon coca growing in pots, with fresh colchicum and gentian flowers in the foreground. Yet more was in store inside the pharmacy. The modern products on counter display were shown to effect against a background of blue shop rounds (408 said the lady who dusts them). A collection



Excursionists at St. Andrews





At top of page: A group of Conference members coming off the first of the two trains to arrive at St. Andrews.

At left: Sightseers in the quadrangle of St. Salvator's College.

Above: Tea break in the stained-glass-windowed hall of St. Salvator's College.



LUNCHEON INTERVAL: Relaxed after their morning concentration at - perhaps - the Science Sessions, or newly back from an excursion, members are in their places at table and any moment now the food will arrive.

of about sixty metal mortars adorned niches in the shelving, each labelled with its country of origin (Holland, Greece, France, Spain, Flanders and England) and approximate date. Earliest was a Hamadan (Islamic) mortar of the 12th century. To drag oneself away was difficult-but train times had to be met.

Just before the Conference visitors arrived at St. Andrews, two armed men raided the British Linen Bank at the junction of Market Street and College Street and ran off with about £500. Police later found most of the money in a car that the robbers had apparently abandoned. One report says that it is believed the men panicked thinking they were being followed.

TO mark the visit of the Conference to Edinburgh the National Library of Scotland has arranged a display of valuable manuscripts of great pharmaceutical interest extending from the 12th-18th Century. From Durham Cathedral, though now in the possession of the Library, there is a collec-tion of medical works by Master Herbert the Doctor written in the 12th Century. The opened page shows the microtegni of Galen. Also shown are various receipted apothecary accounts of the 16th and 17th Centuries including one for the Dowager Marchioness of Douglas rendered by James Borthwick, the first Surgeon Apothecary in Scotland in 1674 (see C. & D., June 30, 1962), which ends with the melancholy item of "ane embowelling and ane Embaulming, wt 3 Charcloths. Pouders, balsames, lotiones, oyles and sweet oyles for the coffine, etc." Another rendered by John Hamilton of Edinburgh on July 16, 1641, contains items for a purgative potion at the cost of £2 10s, and a mass of pillules for Margt. MH, £2 1s, 4d.

A recipe for cleaning the teeth is composed of bysson, sage, alum, and

composed of hyssop, sage, alum and rough barley steeped in Claret wine

and used to wash the teeth frequently. Of unique interest is a Gaelic manuscript volume containing difficulties relating to medicine. It is a very small vellum manuscript, only $2\frac{1}{2} \times 1\frac{3}{4}$ in. in size and it dates from the middle of the 15th Century. A family collection of 18th Century medical recipes contains the following:

Take a dose of the following pills.

Pulv. Rhei elect one scruple Aquila Alba gr. iii Mucilag Gum Arabic q.s. Ut form pilul v. inauranda Et summo marne devorand

This gentle purgative to be repeated

every 5 or 6 days.

A manuscript of a Dalkeith apothecary dated 1733-35 recounts the case of a Mr. Lewis Douglas who sought medical aid for a headache which he thought had been caused by the changing of a new wig for an old one. The treatment consisted of bleeding, purging and sweating. "This night at bed-time I gave him, for he had not rested well in former nights,

Aq. Menth. C. cinnam s.v.a.a. halfan-ounce

S. Syrup. Diacod. 6 drachms Laud

Liquid gutt v.i.

It caused him sweat a good deal and also rove a little in his sleep." (An account of this book was given in the C. & D., June 28, 1958.)

A casebook of Dr. Andrew St. Clair,

written in 1735-6, is entirely in Latin, as befitted one who was one of the founders of the Faculty of Medicine at Edinburgh University. Of great interest to pharmacists was a manu-Of great script volume of Lcctures upon Pharmacy by the famous William Cullen.
One of the more bizarre treatments

of earlier times appears in a volume of medical recipes begun in London in 1709 by the Duke of Argyle "For the giddyness of the Head,"

The gum of a Peacock, dried and powdered.

Of this take as much as lye on a sixpence in any agreeable liquor for three mornings together fasting.

The display of manuscripts is attractively mounted in three handsome cases, each exhibit bearing a card des-

cribing its origin and its contents.

The Royal Scottish Museum had arranged a display of drug jars to mark the occasion of the Conference and many of the jars were examples of Italian and Lambeth ware.

Conference Club

Tuesday could be described as "getting-to-know-each-other-better day. After the Conference excursion the innovation of the Conference Club, at which members were able to meet in-formally, was held in the Assembly Rooms, providing ample space in which to circulate, talk and drink. Members of the local committee were repeatedly congratulated upon the success of the evening. The informality was widely appreciated, and when conversation lagged there was an opportunity to dance to a lively three-piece band. Generally, however, conversation Generally, however, conversation seemed to occupy the time of most of the members. Now and again interruptions were made for minor announce-ments but even the use of electrical aids failed to still the buzz of conversa-

Ladies See the New Forth Bridge

A MASSIVE structure of iron but a slender, delicate-looking and fascinating suspension road bridge now spans the Forth alongside its famous railway counterpart. What has now become Scotland's number one pastime—bridgewatching—was marred on Monday by torrential rain when the ladies (and a good many gentlemen) paid a visit to the Forth Valley and bridges on the first tour of the Conference. The route left by the A6 and passed through Kirkliston and South Queensferry, where both rail and road bridges could be seen. The Hawes Inn has its associations in literature in Scott's "Antiquary" and Stevenson's "Kidnapped." The small island of Inchgarvie serves as a stepping-stone for the railway bridge. Inland from South Queensferry there is Hopetown House belonging to the Linlithgow family, where tea was taken. The return to Edinburgh was via Cramond Bridge.

Conference Briefs

The Conference Dialogue Mass was celebrated by Father Jos. Ryland-Whittaker, S.J., at 7.45 p.m. on Sunday, September 13, and a reception was held after the Mass.

On the rising ground called the Mound below Edinburgh Castle, the local authority has planted a flower bed showing "B.P.C. 1964" in plants. The city now usually honours its Conferences in that way.

Among the exhibits at York Place were results of investigations into the properties and uses as emulsifying and suspending agents of various cellulose derivatives.

Science Sessions of the Conference

DR. MITCHELL acted as chairman of session A of the first science session held at Heriot-Watt College on Monday afternoon. Dr. Mitchell announced that discussion would take place after the first three papers had been read. The first paper was a short communication by MR. A. HALL.

Corticosteroid Chromatography

A. HALL

THIN-layer chromatography, simple and useful for rapid handling of many samples, is capable with 2,5-diphenyl-3 (4-styrylphenyl)tetrazolium as a spray reagent, of detecting less than 1 microgm. of corticosteroid (0.25 µgm. of cortisone acetate). The author describes two solvent systems which allow the separation of closely related substances. With the systems two analyses suffice to identify and separate the corticoids. (From Glaxo Laboratories, Ltd., Montrose, Angus)

MR. J. S. WRAGG presented the second paper which was:—

Thin-layer Chromatography in a Limit Test for Related Foreign Steroids

C. J. CLIFFORD, J. V. WILKINSON and J. S. WRAGG

To attain the maximum separation of the steroid impurities in pharmaceutically important synthetic corticosteroids the running of two or more chromatograms using different solvent systems is recommended. Using adsorption chromatography, solvent systems of the type 1,2 - dichloroethane: methanol: water, 95:5:0.2, give the most satisfactory general separations. Some steroids can best be separated by partition chromatography, using formamide as the matography, using formamide as the stationary phase and chloroform:ether: water, 80:20:0.5, or cyclohexane:tetrachloroethane:water, 50:50:0.1, as the mobile phase. A spray reagent of 0.5 per cent. tetrazolium blue and 8 per cent. sodium hydroxide in methanol is recommended. The amounts of foreign related steroids can be limited by running standard amounts of impurities alongside the steroid under test and comparing the colour intensities of the impurities in the steroid with those of the standards.

(From the analytical development group, standards department, Boots Pure Drug Company, Ltd., Nottingham)

Mr. C. A. JOHNSON read paper No. 3.



Mr. C. A. Johnson reads his paper.



Mr. P. F. Boon puts a question on the spot.

Other 17,21-di-hydroxy-20oxosteroids in Corticosteroids

C. A. JOHNSON and SYLVIA FOWLER A METHOD is described for separating corticosteroids by paper chromatography. More sensitive than the present official test, it controls the presence of related foreign steroids uniformly and reproducibly. Details of application of the test to many pharmaceutically important steroids are given, and the authors discuss the relationship of molecular structure to mobility in the solvent systems used.

(From the laboratory of the British Pharmacopæia Commission)

DR. F. HARTLEY, London, said it looked as if both paper and thin-layer chromatography would be required to achieve sensitivity on the one hand and separation on the other. DR. G. FOSTER referred to the B.P., 1963, and the limiting tests. He wanted to know if the impurities in the compounds had any clinical significance. MR. JOHNSON said that the estimate of the control achieved by the B.P., 1963, tests had proved to be somewhat ambitious.

None of the procedures so far considered had proved entirely satisfactory. During the few years before the next B.P., experienced had to be gained in devising tests using thin-layer chromatography.

tography.

MR. HILLMAN, Sandwich, reported that different routes of ascertaining the potency of samples had not always given the same results. Could the question of impurities be tacked in many ways in order to resolve the various problems?

MR. P. F. G. BOON, Horsham, asked if the authors had examined spots

MR. P. F. G. BOON, Horsham, asked if the authors had examined spots under ultra-violet light. He was told that the spots were too small to allow that technique to be successful.

that technique to be successful.

DR. A. R. ROGERS, Brighton, referred to Mr. Wragg's paper, in which it was reported that a large number of investigations had been carried out. He hoped that the information would be published, and not buried in the archives.

DR. F. FISH, Glasgow, referred to the reply given to Mr. Boon, pointing out that spots could be enlarged by passing light through them to enable differences to be measured. Stating that there were a number of interesting problems ahead, Mr. Johnson emphasised that rigid standardisation could be achieved easily in one laboratory but there was some difficulty ensuring standardisation in many laboratories.

MR. G. S. PORTER was then asked to introduce the next paper.

Determination of Chlorpromazine

G. S. PORTER

Few polarographic procedures have been described for the determination of phenothiazine derivatives. A method sensitive at least to 2 µgm. of this class of compound was required, and initially chlorpromazine has been examined. Direct cathodic polarography of chlorpromazine solutions was not satisfactory, but treatment of a solution of the substance with bromine water produced a reducible solution with a well marked polarographic wave. Bromine water was chosen as a suitable oxidant as excess bromine was readily removed by flushing with nitrogen. Thin-layer chromatography of chlorpromazine after oxidation with bromine water showed no spot corresponding to unchanged starting material. After examination of the effect of pH on the cathodic wave, 0.5N hydrochloric acid was chosen as a suitable electrolyte. The determination is applicable to small quantities (0.002 to mil) of chlorpromazine injection (25 mgm./mil) and to corresponding amounts of chlorpromazine tablets and syrup. The nature of the reaction product of bromine and chlorpromazine is unknown: it is not chlorpromazine sulphoxide.

(From the pharmaceutical chemistry laboratories, Department of Pharmacy, College of Technology, Liverpool)

MR. S. G. STEVENS, Welwyn Garden City, said it was not altogether clear whether the author was talking of chlorpromazine base or of the hydrochloride, and MR. PORTER replied that throughout the paper he was referring



Dr. F. Fish raises a point with Mr. Johnson.

to the base except when he had mentioned chlorpromazine injection, which was an official preparation containing

the hydrochloride.

PROFESSOR A. H. BECKETT, London, asked if there had been any temperature changes during the bromiline procedure, and MR. PORTER indicated that temperature "seemed to have very little effect indeed." Time was important, though it was only a minute. The procedure appeared to be sufficiently elastic. When Dr. Foster, Dartford, asked about the specificity of the determination MR. PORTER'S reply was that "work had not been done on mixtures or other tranquillisers." Before paper introducing the next MITCHELL suggested it was opportune to congratulate Dr. Beckett on his recent professorship. Mr. Rowland, his co-author, read the paper.

Determining Amphetamine in Urine

A. H. BECKETT and M. ROWLAND A NUMBER of methods have till now been used for the determination of amphetamine in urine, but all are nonspecific. Gas chromatography provides a method of sufficient specificity and sensitivity to measure the urinary excretion of amphetamine in man after oral doses of as low as 5 mgm. of amphetamine sulphate. Urine is concentrated, loss of amphetamine being prevented by ensuring that it is always present as the hydrochloride. During the concentration methoxyphenamine hydrochloride is added as an internal marker. The concentrate is dissolved in a solvent consisting of triethylamine 5 per cent., distilled water 10 per cent., acetone to 100 per cent., the triethylamine being present to release the amphetamine and methoxyphenamine bases. After chromatographing the solution the ratio of the amphetamine to methoxyphenamine peak areas is obtained. The concentration of the amphetamine in the sample is calculated by reference to a calibration curve of the amphetamine to methoxyphenamine peak area ratios plotted against the concentration of amphetamine in a fixed concentration of methoxyphenamine (0.2 per cent. w/v solution of methoxyphenamine hydrochloride in the amine-acetone solvent). (From the School of Pharmacy, Chelsea College of Science and Technology, London, S.W.3)

MR. ROWLAND, giving a résumé of the paper, referred to work carried out since the paper was published on cyclic variations of the excretion of the amphetamine. MR. J. J. LEWIS, Glasgow, asked if the subjects were human, and whether the cyclic varia-tions could be related to the diet. He was told that the tests had been carried out in humans-students-and it was hoped to extend the work to animal experiments. The authors felt there was a difference in the subjective effects of the drug in acidosis and in alkalosis. Professor S. E. Wright, alkalosis. Professor S. E. Wright, Sydney, Australia, asked if the urine amphetamine formed a large proportion of the dose, and MR. ROWLAND replied that between 20 and 40 per cent. of the d form was excreted, and 20-60 per cent. of the l form. When Dr. Foster, Dartford, asked if the

authors had used methylamphetamine, MR, ROWLAND pointed out that methylamphetamine was metabolised in the

MR. S. F. WOODWARD said he had been trying to ascertain how many patients had been involved in the investigation and "what sort." Such data was relevant and should be given. The reply was "five, ten and fifty students.

PROFESSOR BECKETT said that the new work had been introduced because it was thought to be of general interest. There seemed a general phenomenon demonstrable in studies on urine excretion-"up and down and up again.'

The last paper in the session was read by Mr. B. WARREN.

Determination of Methyl Salicylate

S. G. E. STEVENS and B. WARREN A METHOD described for the determination of methyl salicylate in pharmaceutical preparations is based on gas-liquid chromatographic technique, 10 per cent. carbowax 20M is used as a stationary phase to resolve mixtures containing amyl, ethyl and methyl salicylates, menthol and camphor. The determinations are based on the area triangulation method against a diphenyl reference standard.

(From Smith Kline & French Labora-Ltd., Welwyn Garden City, tories. Herts)

MR. C. A. JOHNSON, London, asked if the authors had any experience of the possible effect of the presence of nicotinates. For internal control purposes it appeared to be a method of great benefit for a particular labora-tory. Had other carrier gases been con-sidered? MR. WARREN did not see any reason why the method should not succeed, though they had no experience of nicotinates. They had not tried other carrier gases.

Science session B on Monday afternoon, with Mr. H. G. ROLFE in the chair, opened with a paper read by Dr. W. R. L. Brown:—

Phage Recovery after Phenol Treatment

W. R. L. BROWN, A. M. COOK and J. ODURO-YEBOAH

In previous studies of the inactivation of bacteriophages, the titres of surviving infective phage particles have most commonly been estimated by the agar layer method of plaque counting. The count obtained may be affected by the composition of the medium used in counting phage after exposure to an inactivating agent. Four methods of estimating phage surviving exposure to phenol have been compared. A tube dilution counting method and an extinction time method, both using peptone water as recovery medium, showed a close correlation in the numbers of infective phage recovered. A high recovery was obtained with both a surface drop method of counting on peptone agar and with an agar layer method. The reproducibility of the counts of untreated phage, and their independence of the methods of counting, shows that the media and methods provide satisfactory conditions for untreated phage to multiply. The ability



Dr. W. R. L. Brown.

of phenol-treated phage to multiply was influenced by the medium and conditions of cultivation, though the results with any one method were reproducible. The recovery of at least the most resistant 1 per cent. of the phenol-treated phage was higher on the agar media than in the fluid medium, suggesting that the increased recovery is due to some factor associated with the agar. Since the recovery of phenol treated phage was found to be almost the same with four different variations of agar the unknown factor must be common to them all.

(From the School of Pharmacy, University of London)

Dr. Brown told his only questioner, DR. H. S. BEAN, London, that no experiments had yet been carried out to show whether the temperature of incubation in the recovery medium (37° C.) was optimal. Dr. Bean had pointed out that for phenol-treated coli it had been found that 30–32° C. was a better recovery temperature.
Two papers by Dr. M. R. W. Brown

and Mr. R. M. E. Richards were next taken together. MR. RICHARDS presented the paper on

Tween 80 and Growth Rate of Pseudomonas Aeruginosa

M. R. W. BROWN and R. M. E. RICHARDS

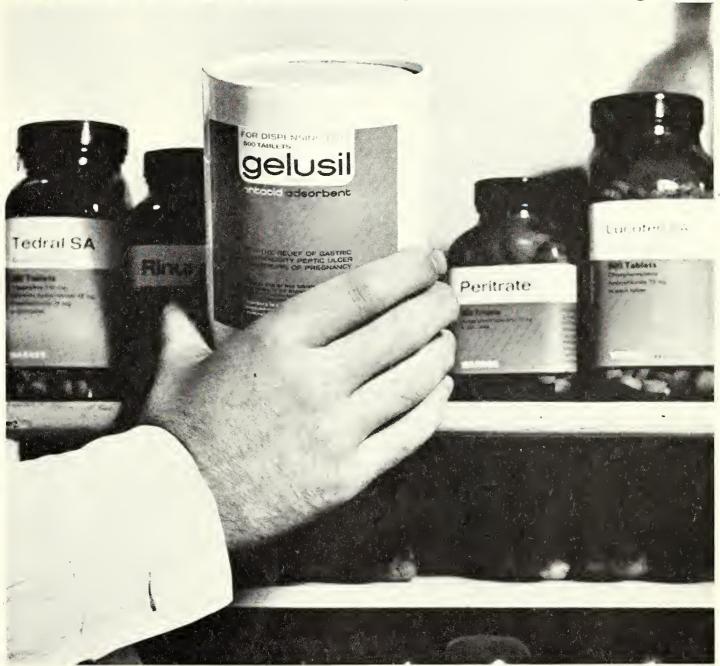
THERE is an apparent change in the rate of growth of *Pseudomonas aeruginosa* at an early stage when determined spectrometrically. The change is associated with cell clumping. In the presence of Tween 80 the effect was eliminated at the control of the cont nated. The reproducibility of the growth rate measurement has been found to be satsifactory.
(From the School of Pharmacy, Bristol

College of Science and Technology)

Dr. Bean pointed out that there were strains which did not show resistance in aqueous solutions, but when the antibacterial agent was used in the formulation of a product such as liq. chloroxylenol, then resistance was shown. MR. D. WISEMAN, Bradford, said that working with chlorhexidine he had found that resistance increased after the test organism had been sub-

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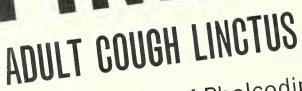
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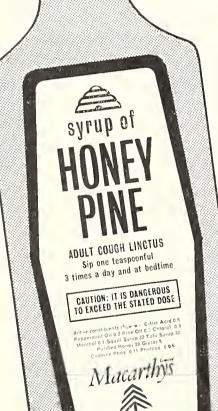
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cultured half a dozen times. To that Dr. Braun added that there were some strains that could become resistant to, and even decomposed by, phenol and the parahydroxybenzoates, so that caution must be exercised when stating that a new substance active against Pseudomonas had been found.

MR. K. A. LEES, Greenford, suggested that, once principles had been established using typed cultures, the tests should be repeated on strains cultured in, for example, rabbit's eye. DR. BEAN, however, disagreed, since typed cultures enabled workers to standardise their materials and methods. MR. J. A. MYERS, Edinburgh, asked whether the hæmolytic effects on red cells of Tween had been studied, but MR. WISEMAN suggested that the study would be irrelevant, as effects on bacterial cell walls and red cell walls differed. Mr. G. R. MILNE, Glasgow, asked whether, since surface-active agents were absorbed on to glass, it could be known how much Tween was effective in the tests. That might be important in the future, when it was desired to formulate, for example, eye drops that would be dispensed in glass bottles with glass droppers. Accepting the point, DR. BRAUN suggested that adsorption might be partly responsible for some contradictions in the literature. MR. LEES added that variation might also be caused by variations between batches of Tween in which the polyoxyethylene chains might differ in length.

The next paper, presented by Dr. V. Walters, was on:—

Inadequacy of B.P. Sterility Tests

N. M. CHAUHAN and V. WALTERS THE B.P. tests for sterility are designed to detect small numbers of viable aerobic and anaerobic bacteria in pharmaceutical products. The U.S.P. includes also a test for fungi, applicable to liquids and suspensions that have not been heated in their final containers to at least 100° for 15 minutes, and to crystalline or powdered solids, surgical dressings and sutures. Inclusion in the B.P. of a test for fungi has been advocated from time to time. During experiments a selection of common airborne saprophytes representing potential sources of contamination of pharmaceutical preparations, were used. Of the sixteen fungi tested, five would fail to be detected by the B.P. sterility tests—N. sitophila and N. crassa because of the unsuitability of the media, P. cyclopium and P. expansum because of the unsuitable incubation temperature, and P. digitatum for both reasons. It is suggested that preparations not sterilised by a heat process should be tested for presence of common airborne fungi using a specified technique.

(From the Department of Pharmacy, University of Ife, Ibadan Branch, Iba-

dan, Nigeria)

MR. SYKES commented that the B.P. incubation temperature used in testing for moulds had been reduced from 37° C to 30°-32° C. That was a step in the right direction but did not go far enough. MR. MILNE described a comparison of Brewer's medium with Sabaraud medium carried out while

attempting to find a suitable test for liquid and dried human plasma. It had been found that the same result could be obtained using both media, but Brewer's needed a longer incubation period—up to twenty-eight days. Mr. Walters replied that moulds generally required oxygen. They would therefore not be expected to be found in Brewer's medium. However they did occur, probably owing to spores rising to the surface, where aerobic conditions were obtained. Dr. Cook mentioned a modification made to his medium by Dr. Brewer, consisting of the addition of a papain digest of soya beans, which had resulted in a better recovery of moulds.

Following that paper Dr. M. R. W. Brown presented:

Resistance of Pseudomonas aeruginosa to Chemical Inactivation

M. R. W. BROWN and R. M. E. RICHARDS

Log phase cultures of Pseudomonas aeruginosa in nutrient broth containing Tween 80 are found to be much less resistant to the action of benzalkonium chloride, chlorhexidine diacetate and polymyxin B sulphate than cells grown in plain broth. It seems likely that the presence of Tween 80 increased the rate at which slime dispersed from the surface of the actively dividing cells, possibly rendering the organism more sensitive to chemical attack. Another possibility is that Tween 80 affects cellmembrane permeability, allowing penetration of chemicals that would not enter the cell in the absence of Tween. (From the School of Pharmacy, College of Science and Technology, Bristol)

MR. G. SYKES, Nottingham, queried the author's statement that Pseudomonas was less resistant to benzalkonium, chlorhexidine and polymixin-B sulphate than to other agents, but DR. Brown quoted several authors in support of the assertion, including a paper by Lawrence, who had examined twenty-seven strains. Dr. A. M. Cook, London, asked whether any of strains investigated by Lawrence had been used by Dr. Brown. "No," replied Dr. Brown, but they, the authors had thought that, if they were successful with one strain, they would then go on to examine others.

Mr. WISEMAN then presented his short communication:

Chlorhexidine and Properties of Micrococcus lysodeikticus

DAVID WISEMAN

CHLORHEXIDINE causes the release of phosphorus-containing compounds from Micrococcus lysodeikticus. Its effect on the release of pentose and material absorbing at 260 m μ , and on the succinoxidase activity of the organism has been investigated. The two effects of chlorhexidine (disruption of permeability barrier of the cells and blocking of electron transport in the cytochrome system) may both be attributed to chlorhexidine combining with the cytoplasmic membrane and causing an alteration or breakdown of its structure. (From the pharmacy department, Bradford Institute of Technology)

Mr. Wiscman added that the experiments had since been repeated using cetyltrimethylammonium bromide, with similar results. Dr. Hugo then reported studies carried out at Nottingham, again using chlorhexidine but using as organisms E. coli and Staph. aureus. He showed slides illustrating agreement with Mr. Wiseman's leakage peak but also showing that at that point the surface was not saturated, and that mean survival time was quite long at concentration. Another showed electronmicrographs of bacterial sections at various concentra-tions of chlorhexidine, with cell contents being lost at peak leakage concentration. Replying, Mr. WISEMAN pointed out in regard to mean survival centration. time that, even at high concentrations of chlorhexidine, there were a few survivals. He did not agree with Dr. Hugo's finding that no leakage Hugo's finding that no lead occurred at high concentrations. leakage fact, leakage was much in excess of that at low concentration, though less than at the peak. To Mr. J. A. VICKERS, Sunderland, Mr. Wiseman said he could not explain how chlorhexidine penetrated the cell wall. The compound was absorbed by isolated cell walls but washed out more easily than it did from bacteria.

Presenting his first paper to a Conference, Mr. S. M. HEMAN-ACKAH,

Nigeria, introduced:

Activity of Some Bactericides in Paraffin-and-water Dispersions

H. S. BEAN and S. M. HEMAN-ACKAH CHEMICAL preservatives may be incorporated in pharmaceutical and cosmetic emulsion systems to prevent microbial deterioration, the effective concentration of preservative being determined empirically. The authors describe experiments that examine the activity of a specified overall concentration of a bactericide in systems of different oil: water ratio maintained at various temperatures. Results show that activity depends upon the concentration of bactericide in the aqueous phase and at the oil: water interface, both of which are controlled by the oil:water ratio. Activity is also governed by the oil: water partition coefficient (K°_w), which is influenced by temperature. It is suggested that the ad hoc addition of preservatives to oil:water dispersions is therefore meaningless.

(From the School of Pharmacy, Chelsea College of Science and Technology,

London)

Mr. E. Adams, Portsmouth, asked whether similar effects occurred when an emulgent was added, and whether the results for phenol applied also to cresol. If so, he said, it might be possible to improve the activity of lysol by reformulation. Dr. BEAN replied that the effects probably would be similar as cresol and phenol had similar partition coefficients. Asked by MR. VAN ABBE, Brentford, whether criticism of ad hoc addition of preservatives was criticism of inoculation experiments, MR. HEMAN-ACKAH pointed out that, in the formulation of B.P.C. creams, no account was taken of the phase-volume ratio when including a preservative, e.g. 0·1 per cent. of chlorocresol. Dr. BEAN emphasised the

point by stating that, whereas the conventional concentration was suitable in water-paraffin preparations, in which the partition coefficient was less than one, in some arachis or olive oil emulsion systems the final concentration of preservative in the aqueous phase was much less than was generally believed. Asked by Mr. G. H. BURNETT, Sudbury, whether the method of adding the preservative mattered, Mr. Heman-ACKAH suggested that ideally it should be dissolved in that phase in which it was more soluble. A suggestion from MR. LEES that, in testing a new system, time might be allowed for equilibrium, then antibacterial tests carried out on each phase separately, was rejected by both the speaker and Dr. Bean. If the phases were separated the wrong answer would be obtained because the organism and the preservative were to be found in greater concentrations at the interface. Further work on the variables in oil/water systems, shortly to be published, would show that the order of the reaction was important, and that that reaction must take place at the interface. No evidence was available on effects on bacteriostatic activity, Mr. Heman-Ackah told Professor Cook who had suggested that that was the more usually required when preserving a cream.

FIRST to appear at the rostrum at the Wednesday morning Science Session, with Dr. Mitchell in the chair, was MR. W. R. BUCKETT, who was presenting his first paper.

Analgesic Activity, Acute Toxicity and Chemical Structure of Esters of 14-hydroxycodeinone

W. R. BUCKETT

It has previously been shown that hydroxylation and subsequent acylation of codeinone at the 14- position produces marked changes in analgesic activity and acute toxicity in mice. In the study now reported esterification to give 14-acetoxycodeinone produced a compound with four times the potency of morphine. Further increases in the length of the acylating group at position 14 gradually increased the potency, maximum potency (sixty times that of morphine) being obtained with 14-heptoyloxycodeinone (R = COC₆H₁₃). Further increases reduced analgesic activity. Introduction of a single methylene group between the ester carbonyl



and terminal phenyl gives a compound $(R = CO \cdot CH_2 \cdot Ph)$ of high analgesic potency, and a further methylene group (R = CO·CH₂·CH₂·Ph) gave a compound having over 100 times the potency of morphine. Introduction of a double bond ($R = CO \cdot CH \cdot CH \cdot Ph$) did not diminish that activity. Onset and duration of analgesia of all the compounds in mice are shorter than those of either morphine or codeine. Intravenous and subcutaneous toxicities were found similar in compounds causing death by convulsions, but to differ widely in compounds causing death by respiratory depression. The authors suggest that the compounds in the series would appear to fit the anionic, flat surface and possibly the cavity receptor sites postulated for analgesics by Beckett, Casey, Harper and Phillips (1956).

(From the research department, Edinburgh Pharmaceutical Industries, Ltd.)

Dr. J. B. STENLAKE was informed that the potencies had been expressed on a weight basis.

DR. G. E. FOSTER, Dartford, asked whether the author was satisfied with his limits of error. Results obtained at Dartford, he said, suggested that LD50 depended upon the temperatures at which the mice were kept during the experiments. MR. BUCKETT replied that the work had been carried out in airconditioned laboratories at 20-23° C.

PROFESSOR A. H. BECKETT, London, congratulated the author on his work but asked whether any information was available on the hydrolysis of the compound. Metabolic attack, he suggested, might be a more important factor in activity than that at the receptor site. Had the correlation between mydriatic action, Straub reaction and addictive properties been ascertained? By way of

reply, MR. BUCKETT showed slides to show some toxicity reactions and addictive properties. As a rough guide for equivalent analgesic activity, he said, the codeinones were twice as addictive as morphine.

To MR. K. C. JAMES, Newport, who asked whether the solubility of

the compounds might explain some differences, the speaker said that no physiochemical studies had been done.

MISS S. D. EVERETT presented the next paper on:—

A Parasympathetically-innervated Œsophagus Preparation

W. C. BOWMAN and SALLY D. EVERETT

An isolated parasympathetically-innervated preparation from the chick esophagus is described. The preparation was tested for response to acetylcholine, physostigmine and atropine; ganglion stimulant and blocking drugs; sympathomimetic amines and anti-adrenaline drugs, and guancthidine. Relatively free of connective tissue, the preparation was found to respond briskly to drugs. In most instances the drugs could be easily washed out. The simplicity, robustness and cheapness of the preparation are considered to make it useful for students' practical classes. (From the department of pharmacology, School of Pharmacy, University of London)

To DR. BROWNLEE, who had asked whether the authors considered their results supported the theory that 5-hydroxytryptamine took part in the mediation of parasympathetic action, DR. BOWMAN (Riker Laboratories) replied that, though the sensitivity of the method for 5-HP was reduced to half in the presence of acetylcholine, the sensitivity of the preparation was still good, even with low doses, plus the advantage that interfering substances could be "diluted out of existence." MR. C. A. Johnson thought that, though the preparation had been commended to teachers, commercial organisations would also be interested in it.





LECTURER AND AUDIENCE: At left: The Conference lecturer, Professor M. F. A. Woodruff, with the Conference chairman and president, At right: Conference members listening to Professor Woodruff's lecture (p. 285).

NEWS OF THE WEEK

Phenothiazines

PERMANENT BRAIN DAMAGE REPORTED A SUGGESTION that phenothiazine derivatives (including chlorpromazine and trifluoperazine) may, in time, cause permanent neurotoxic effects, is made by Dr. R. Hunter and others (National Hospital, Queen Square, and Friern Hospital, London) in the current issue of Proceedings of the Royal Society of Medicine. They describe a syndrome characterised by continuous abnormal particularly grotesque movements, movements of the face but also involving the limbs, which was noted in thirteen of 250 women patients in a mental hospital. All had brain damage, as shown by the presence of dementia. Six had been leucotomised, nine had had ECT (electroconvulsive therapy) and two had had insulin coma treatment. They had been on phenothiazine derivatives for periods of eighteen months to five years before abnormal movements were first recorded, but after eight months to three years since treatment was stopped, all remain unchanged in their condition. No cases were seen among 200 men studied. The authors suggest that the damaged brain could be expected to show drug damage earlier or in a more obvious form and they expect that once the syndrome is generally recognised, a spate of cases will come to light. They stress the urgency of drawing attention to the complication in view of current advice (not only from pharmaceutical companies) that such drugs may safely be given indefinitely.

Research Fellowships

DENMARK AND BRITAIN MAKE AWARDS THE Carlsberg Foundation, Copenhagen, Denmark, and the Wellcome Trust, London, announce that the Carlsberg-Wellcome travelling research fellowships for the year 1964-65 have been awarded to Mr. Jens Hyldgaard-Jensen, University of Copenhagen, and Mr. G. C. Coles, Cambridge University. Mr. Hyldgaard-Jensen, recently a research scholar at the Royal Veterinary and Agricultural College, Copenhagen, will work at the Rowett Research Institute, Aberdeen, under the guidance of Dr. R. N. B. Kay, on problems of the physiology of feeding in cattle. Mr. G. C. Coles, a post-graduate student in the department. graduate student in the department of zoology, Cambridge University, will carry out research under Professor T. Weis-Fogh at the zoophysiological laboratory, University of Copenhagen.

Food Labelling

STANDARDS COMMITTEE REPORT

THE Food Standards Committee, in a report on the provisions of the Labelling of Food Order, 1953, has recommended stricter food labelling requirements. Among the main proposals are: (i) that there should be specific provisions prescribing the size and location of the information to be printed on food labels; (ii) that there should be much stricter requirements for the

declaration of chemical additives in food, and (iii) that there should be a large reduction in the exemptions from the present provisions which require the food label to declare the common or usual name of the food, a full list of its ingredients and the name and address of the packer or labeller. Representations concerning the proposals may be made by interested parties and should be addressed to the secretary, Food Standards Division, Ministry of Agriculture, Fisheries and Food, Great Westminster House, Horseferry Road, London, S.W.1, to arrive not later than March 10, 1965.

Nielsen Index

RETAIL SALES RISE IN MAY-JUNE

RETAIL pharmacists' total average weekly turnover during May-June was £5.9 millions, an increase of 3.3 per cent. over the corresponding period of 1963 according to the Retailer Report issued by A. C. Nielsen Co., Ltd. The increase was contributed to by both cash and National Health Service receipts in almost equal proportions. The big start to the peak summer period, together with the exceptionally good weather during July and August, augurs well for a record in those two months There was little change in the percentage share of total income received from N.H.S. receipts when compared with 1963.

Industrial Health

REPORT BY INSPECTOR OF FACTORIES THE annual report by H.M. Chief Inspector of Factories on Industrial Health, published as a White Paper on September 15 (Cmnd. 2444, H.M. Stationery Office, price 4s.), states that there were 503 notified and accepted cases of industrial disease or poisoning received by the Department during 1963. The total number of lead poisoning cases notified and regarded as confirmed was ninety-three, compared with eighty in 1962. That was a post-war peak but it includes several cases which were recognised from clinico-pathological surveys, and which might otherwise have passed undetected. Three accepted cases of mercury poisoning were notified in 1963. The first was employed on the manufacture of thermometers, the second in a mercury cell room in a chemical works, and the third on the preparation of an organic fungicide.

Accidents in Factories

FEWER FATALITIES AT WORK

THE number of accidents reported in 1963 to H.M. Factory Inspectorate was 204,269, or 7.4 per cent. higher than in 1962, whilst fatal accidents numbered 610, a fall of 58 from the previous year's total. These figures were ous year's total. Those figures ous year's total. Those figures were revealed in the annual report of H.M. Chief Inspector of Factories published on September 15 (Cmnd. 2450, H.M. Stationery Office, price 8s.). The Chief Inspector (Mr. R. K. Christy) states that he believes the rise in accidents may have been due in part to the

increased publicity given to employers' obligations to report accidents. Examination of the accidents reported showed that "lack of training, inadequate supervision, sometimes amounting to downright negligence, and the bad example of older workers are, either singly or in combination, the main causes." Whilst a proportion of those accidents might be connected with breaches of factory legislation, experience showed that the majority occurred in circumstances which could not readily be controlled by legislation.

Office Staff

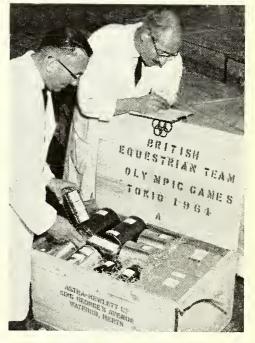
NEW SERVICE OPENS IN LONDON

A NEW commercial and clerical office has been opened by the Ministry of Labour at 283 High Holborn, London, W.C.1. It is designed to meet the needs of employers seeking office staff and of office workers seeking work in London or looking for a change of job. Workers will be able to obtain information on vacancies in the Greater London area. Hours of opening are 9 a.m. to 5.30 p.m. (7 p.m. on Thursdays). The service provided is entirely free to both employers and workers.

Production Planning

ROLE OF THE "VISUAL DISPLAY"

ONE way of reducing the paperwork involved in the efficient planning and control of production is to install a simple visual display, says a new booklet "Visualizing the Facts," published by the Department of Scientific and Industrial Research. The booklet describes the various systems available for the presentation of relevant data, including slotted panel and peg board, strip and pocket, tablet channel, numerical digit and semi-mechanical systems, together



FOR THE OLYMPIC GAMES: One of the cases of veterinary goods for the British Equestrian team supplied to Tokio by Astra-Hewlett, Ltd., Watford, being checked before shipment to Japan.

with advice on the jobs for which each system is most suitable and the approximate cost. Copies of the booklet are obtainable free from the library, D.S.I.R., State House, High Holborn, London, W.C.1.

Pesticide Sales

LITTLE CHANGE IN SECOND QUARTER

TOTAL sales of pesticides and allied products by larger manufacturers in the second quarter of 1964, at £6.7 millions, were virtually unchanged compared with the second quarter of 1963, according to the Board of Trade's "Business Monitor." Total sales of pesticides at £2.4 millions were 4 per cent. higher than a year ago; in that group, insecticides increased by 3 per cent, and other pesticides by 25 per cent, but rodenticides fell by nearly 3 per cent. Total sales of fungicides at nearly £1 million were 18 per cent. lower than in the second quarter of 1963, but as sales in the first quarter of this year were 47 per cent, above the low level of the first quarter of 1963, a comparison of sales during the first six months of each year (giving an increase of 9 per cent, in 1964 over 1963) would be more realistic; export sales of fungicides in the second quarter of 1964 were 39 per cent. higher than in the corresponding quarter of 1963.

Urdang Medal 1964

ITALIAN PROFESSOR HONOURED

NINTH Urdang medallist, who re-ceived his award at Amsterdam on September 9, is Dr. Antonio E. Vitolo (professor of the history of pharmacy at the University of Pisa, Italy). The medal, sponsored by the American Institute of the History of Pharmacy, was established in 1952 to recognise original and scholarly publications on historical and socio-historical aspects of pharmacy. It was initiated in honour of George Urdang, a pharmaceutical historian of international renown. The winner is selected by the International Academy of the History of Pharmacy. Dr. Vitolo has been president of the Italian Institute of the History of Pharmacy and secretary-general of the Italian Institute of the History of Chemistry. He is a member of council of the National Academy of the History of Public Health of Rome, and his numerous awards include the Lauri del Palatino of the History of Pharmacy (1955), Schelenz plaque (1958) and Honci medal (1963) as well as honorary memberships of numerous historical societies in other countries.

IRISH NEWS REPUBLIC

A New Factory

FIRST FOR BASIC CHEMICALS IN EIRE

IN the presence of a large gathering a new £1-million pharmaceutical plant for Squibb, Ltd., situated in beautiful surroundings at Swords, co. Dublin, was formally opened by the Minister for Industry and Commerce on September 10, after the premises had been

blessed by Rev. Donal O'Leary. The factory is the first in the country for the production of basic pharmaceutical raw materials. Into Dublin specially for the occasion flew a group of American executives headed by Mr. John J. Toohy (senior vice-president and chairman of the pharmaceutical policy committee for Olin Mathieson Chemical Corporation. Other members of the party were Mr. Robert W. Middlebrook (an Olin vice-president and the general manager of the international division) and Mr. Everett H. Bellows (vice-president of corporate services for the Corporation in New York). They heard Mr. Lynch say at the lunch "May I wish the company success and prosperity for your operations in Dublin and express the hope that still more U.S. firms may realise that Ireland's incentives to new industry are well worth the attention of companies contemplating setting up plants in Europe. The Minister said the campaign carried out by the Industrial Development Authority had brought to Ireland about twenty-five factories from the U.S. The importance of the Squibb factory could be appreciated from the export target of £1½ millions which the company had set itself in the first year of production. Mr. Middlebrook, who presided, said that the company had decided to authorise additional expenditure of about £300,000 fixed capital and about £700,000 additional working capital to double the size of the existing plant. Among the guests were Mr. J. F. O'Grady (managing director, Squibb (Ireland), Ltd., and Mrs. O'Grady; Messrs. M. L. Cashman and T. B. O'Sullivan (members of the Council of the Pharmaceutical Society of Ireland); the registrar (Mr. J. G. Coleman); the Dean (Dr. R. Timoney) and Mr. B. Smith (secretary, Irish Drug Association).

Illegal Poisons Sale

JUDGE COMMENTS ON "SMALL PRINT"

AT Thurles court on September 2, Martin Cummins, Upper Mitchel Street, trading as C. & L. Supermarket, was summoned for selling a cough mixture containing a poison (codeine) without having the container labelled with the name and address of the seller. He was also summoned for selling a poison without being qualified to do so. Having examined the label, the justice remarked that poison was not mentioned on it. When the word was pointed out to him he commented that it was "in very small print." An inspector of the Pharmaceutical Society of Ireland said he purchased a bottle of Famel syrup and asked an assistant if the proprietors were qualified to sell articles containing poison. He was informed that they were not. There was no supervision of any kind over the sale of articles. The prosccution had been brought because an accident might arise out of the sale of such commodities. Defending solicitor said that, immediately the matter was brought to his notice, the defendant had got rid of the remaining supplies. Defendant was fined £1 and expenses totalling £4 with £5 5s. costs, were awarded to the Society.

IRISH BREVITIES

THE REPUBLIC

THE Irish Drug Association is holding a regional delegate meeting in the Country Club hotel, Kilkenny, at 3.30 p.m., on October 18.

THE Irish Packaging Exhibition is being held in the main hall, Royal Dublin Society, Ballsbridge, Dublin, September 28 to October 2.

NEWS IN BRIEF

SOME Dover chemists are to close earlier—at 5.30 p.m.—except when on rota and Bank holidays.

FIGURES for chemists' retail sales given in the C. & D., September 12, p. 239, referred to July and not as stated.

A BRANCH of the Yorkshire section of the British Association of Chemists was formed in Hull on September 8.

INCIDENCE of anthrax, fowl pest, footand-mouth disease and swine fever are dealt with in the report on Animal Health Services in Britain 1961 and 1962 (H.M. Stationery Office, 7s.).

FIRST direct cable circuits between Japan and Great Britain have been opened in the International Telex service; hitherto the service has been operated over radio circuits only.

THE Ovaltine farm's Jersey herd owned by A. Wander, Ltd., ended a successful season by winning the first prize and championship at the Buckinghamshire County Show (held at Aylesbury on September 3) with "Lesson's Dreamer's Queen."

A COMBINED air and road mail service has been introduced by the Post Office between London and Aberdeen making use of the newly opened Forth Road Bridge. The service will give earlier delivery to 5 million letters a year.

HAVING taken £20 cash from the tills, thieves turned their attention to a display case and took 300 bottles of perfume, valued at £1,000, in a daylight raid on the pharmacy of C. & P. James, Ltd., 29 The Parade, Cheltenham, Glos, recently.

Following the theft of 6,000 "purple heart" tablets from a Thanet pharmacy during the August Bank-holiday week-end, a further 1,000 tablets have been stolen from another, D. Midgley, Ltd., chemists, Station Road, Westgate-on-Sea, Kent.

AGREEMENT has been reached between the Union of Shop, Distributive and Allied Workers and the Multiple Shoe Retailers' Association to introduce a five-day working week of forty-two hours for workers in the multiple footwear trade.

MR. S. P. Chambers (chairman, Imperial Chemical Industries, Ltd.), who will deliver the eighth Leverhulme Memorial lecture, on May 6, 1965, has chosen as his subject "The Place of the Chemical Industry in the Development of the World's Economy."

A LIST of "British Weeks" and store promotions being organised in towns and cities throughout the world during the remainder of this year and in 1965 has been released by the Export Promotion and Fairs Branch of the

Board of Trade, Queen Anne's Mansions, Queen Anne's Gate, London, S.W.1.

THE Minister of Housing and Local Government (Sir Keith Joseph) proposes to approve, with modifications, an amendment to the Lancashire Development Plan that would provide for the reception of approximately 42,000 people from Manchester, at Westhoughton, Lancs. The present population of the town is approximately 17,000.

An appointments service to help members and employers has been initiated by the Institute of Packaging, Malcolm House, Empire Way, Wembley, Middlesex. Employers seeking qualified packaging executives may send details of the vacancy to the Institute's secretary, who will then notify all suitable members on the appointments register.

Wearing smocks as if they were assistants, several men broke into the camera shop of Youngs of Leicester, Ltd., Belvoir Street, Leicester, recently, and stripped the display window of cameras valued at about £5,000. They then built up a fresh display using empty boxes and cheaper cameras. A Swiss ciné camera worth about £200 and many German and Japanese 35-mm. cameras were among the stolen property.

A CODE of practice for the protection of persons exposed to ionising radiations in research and teaching has been published by the Ministry of Labour (H.M. Stationery Office, price 4s. 6d. net). The code covers research laboratories, research establishments and teaching laboratories in which ionising radiations are used or radioactive substances are present excepting hospital research establishments, to which a code being published in October will apply, and schools and other establishments whose work with ionising radiations is confined to the level found in schools.

Courses and Conferences

THE department of pharmacy, Liverpool College of Technology, has arranged for pharmacists a post-graduate course on "Some Clinical Aspects of Modern Drug Therapy." Organised by Mr. N. H. Booth, M.Sc., F.P.S., and the head of the department (Mr. T. L. Bowyer, F.R.I.C., F.P.S.), the course comprises eight lectures held on Tuesday evenings from September 22.

SPORT

Gol

LIVERPOOL CHEMISTS' GOLFING SOCIETY. A meeting was held at the Royal Birkdale golf club on August 12. Results: Cow & Gate, Ltd., cup and prize, J. P. Fox (18), 68. Ayrton, Saunders & Co., Ltd., prize, S. G. Bourne (6), 76. Liverpool Chemists' Golfing Society prizes, C. H. Marsland (18), 76; E. Wild (10), 78.

LONDON CHEMISTS' GOLFING SOCIETY. Some fifty members and guests attended the Society's visitors' day at Moor Park golf club on September 9. Winners were: Medal competition, Mentholatum prize, Mr. R. Hedges (4), 73; and Professor Flint cup and prize, Mr. E. S. Jobling (8), 76. Stableford competition, Yardley cup and prize, Mr. P. J. Thorp (12), 35 points; and visitors' prizes, Mr. K. Hanson (16), 34 points; and Mr. D, Hedges (1), 33 points.

TOPICAL REFLECTIONS

By Xrayser

Privileged shopkeepers

In his address to the First World Congress of Jewish Pharmacists, Sir Hugh Linstead said: "Pharmacy can, if it wants to, go with the tide. It can become a group of privileged shopkeepers. Equally each pharmacist, without aggression or overplaying his hand, can decide to declare himself an individual practitioner who determines his responsibilities in the last resort not by law but by a private and individual contract with a sick person to help him as one man helps another." In examining that statement it is necessary to bear in mind the international audience to which it was addressed, and also to remember that the practice of pharmacy varies considerably throughout the world. Nevertheless, it is not out of place to examine it in relation to ourselves, for we, also, are pharmacists. What, for example, are the shopkeeping privileges we enjoy? By virtue of our qualification we dispense prescriptions—but that is not to be regarded as a privilege. It is, rather, a professional right earned by long study and examination. We are, by law, entitled to sell certain substances as authorised sellers of poisons. That, for the pharmacist, must also be regarded as a professional right, and a privilege only in so far as it is virtually a legal monopoly. As Sir Hugh points out, it is a position of trust, for within that field lies scope for the exercise of professional discrimination, and equally for the exercise of conscience. It is in that field that the pharmacist must determine his responsibilities, as Sir Hugh said, not by law, but by a private and individual contract to help the sick. What other privileges does the pharmacist have as a shopkeeper in this country? Outside of the functions already mentioned which are exercised under acts of Parliament, none. Medicines that do not contain any of the ingredients which restrict their sale to authorised sellers may be sold as freely as turnips, collar-studs, hairpins, envelopes or toy soldiers. The fact that enormous quantities of medicines may be sold by people with no knowledge whatever of their action or uses limits the privileges of the privileged shopkeeper.

Liberty

Another point made by Sir Hugh Linstead (p. 232) was that the individual should have complete liberty to choose the form of medicine he believes best for his needs, even to following such treatment as his own wisdom or folly prescribes. "The amount of responsibility which a pharmacist is prepared to accept when a member of the public asks for a medicament without a prescription is a fair test of whether or not the pharmacist thoroughly understands what are the duties of a profession," said Sir Hugh. I am entirely in agreement with that statement, and if all pharmacists had thoroughly understood and appreciated that responsibility and all that it involves, pharmacy would have been in a different position today. Sir Hugh went on to deplore the legal limitations that were steadily diminishing the field within which a pharmacist could exercise his discretion and freedom of choice, and made a strong plea for individualism. "If we weaken the influence of the individual in any of our fields, all suffer for it," he said. The individual pharmacist has had it in his power, by following a thoroughly responsible line, to prevent encroachment on the field in which he exercises the discretion and freedom of choice Sir Hugh wishes to see retained and strengthened. But liberty is not interpreted in the same way by all individuals, and not all have the same conception of what constitutes responsible behaviour.

Cosmetics

If justification is required for the sale of nylon stockings in the pharmacy, it is surely to be found in the letter on p. 248 which refers to stockings as "really a leg cosmetic." What a wonderful vista that opens up for the business-minded pharmacist! For if stockings are really a leg cosmetic, surely hats are a head cosmetic, shoes a foot cosmetic, gloves a hand cosmetic and—but perhaps it would be wise not to extend the list further. Here, also, is a fair test whether or not the pharmacist understands the duties of a profession.

PARLIAMENT

AN announcement by the Prime Minister on September 16 confirmed that the General Election is being held on October 15. Dissolution of the present Parliament takes place without a recall of members on September 25, and the new Parliament will be summoned on October 27.

LEGAL REPORTS

Assistant Stole Tablets

A SIXTEEN-year-old chemist's assistant, who admitted at Bristol juvenile court on September 7 that he had stolen more than 500 "purple heart" tablets from his employer, said: "I sell them to blokes I meet at dances for sixpence each." He added, "I only take them myself occasionally to help me work through the day because I don't go to bed very early." He was remanded for two weeks for probation reports.

Stole from Employers

A MAINTENANCE worker, Robert John Craven, 122 Canonbury Avenue, London, N.1, was fined £50 at Old Street magistrates' court on September 8 for stealing a quantity of cosmetics belonging to his employers, Innoxa, Ltd., 436 Essex Road, Islington. At his request two similar offences were taken into consideration. A police officer said the value of the goods by retail standards was £33 3s. 2d. According to a statement read to the court, Craven was alleged to have told the police that he had been stealing stuff from his employers and selling it to another man. The other appeared at Thames court and was fined £20 for receiving. The detective mentioned that both men were previously of good character.

Altered Fifty Prescriptions

At Liverpool on September 11, Mrs. Frances May Collings and her husband, Giles Eric Collings, 42 Adlam Road, Liverpool, 9, admitted three charges of receiving a total of 160 Preludin tablets by means of forged National Health prescription forms. Mrs. Collings was put on probation for two years and her husband was fined a total of £30—£10 on each of the three charges. The prosecution stated that, following information received, the police interviewed the couple and Mrs. Collings said in a statement: "About nine months ago my doctor started to cut down the tablets from 100 to fifty per week. I could not do without them so I started to alter other prescriptions the doctor gave me for other medicines for the family. I have altered about 50 prescriptions by using bleach."

Alleged Attack on Pharmacist

AN unemployed youth, Kevin Stapleton, of no fixed abode was accused at Clerkenwell, London, magistrates' court on September 11, of assaulting a pharmacist (Mr. J. R. Campbell) in a Kings Cross pharmacy on September 3, with intent to rob him. Mr. Campbell said he was alone in the dispensary at the rear of his shop when he heard someone enter the shop. He saw Stapleton, who

"pounced" on him and forced him to the floor at the entrance to the dispensary. Mr. Campbell added that during the struggle a customer whom he knew entered the pharmacy whereupon the accused dashed away. A police officer gave chase and eventually caught Stapleton about a quarter of a mile away. Told he would be committed for trial at London Sessions, Stapleton applied for bail and said he could produce sureties. They were, however, refused.

COMPANY NEWS

Previous year's figures in parentheses

KIMBERLY-CLARK, LTD.—Mr. D. T. Wilkins (general sales and marketing manager of the company's consumer division) has joined the board as marketing director of the consumer division.

SMITH & NEPHEW ASSOCIATED COMPANIES, LTD.—Group sales for the first twenty-four weeks of 1964 show an increase of 10 per cent, over the comparable period of 1963. Profit before deducting taxation and minority shareholders' portion, £1,513,000 (£1,470,000). An interim dividend of 3½ per cent (last year after adjusting for the 1964 capitalisation of reserves —3 1/5 per cent) is declared.

ASPRO-NICHOLAS, LTD. — The company have agreed to acquire for £250,000 the issued share capital of Damancy & Co., Ltd. (44,050 £1 shares) in cash. Last audited accounts of Messrs. Damancy and a wholly owned subsidiary as at March 31, give the value of the group's net tangible assets as £74,352; net profits, before tax, for the year ended on that date were £36,792. It is intended that the company's activities shall continue at Ware, Herts, under present management with present policies.

BUSINESS CHANGES

MR. T. CASSIDY, Bantry, co. Cork, Eire, has opened a pharmacy at Shannon Airport.

MR. R. C. EDWARDS, M.P.S., has acquired the pharmacy of Mr. J. Lawrence, M.P.S., 214 Green Street, Forest Gate, London, E.7.

Appointments

TRUFOOD, LTD., Wrenbury, Ches, have appointed Mr. J. W. Harding their representative in a newly created territory comprising Kent and the East and South-east London postal districts.

THE Warner-Hudnut group of companies have appointed Mr. E. A. Cooper marketing manager of Adams Brands Sales, Ltd.. and Mr. P. J. Medcalf, marketing manager of the group's toiletries division.

SMITH KLINE & FRENCH LAB-ORATORIES, LTD., Welwyn Garden City, Herts, have appointed Mr. J. P. A. Wall their agricultural technical representative in Kent, Surrey, Sussex, Hampshire and Berkshire.

M. ATKINS, LTD., Melina Laboratories, Cork, Eire. have appointed Mr. G. O'Nolan their marketing manager. Mr. O'Nolan, who has been associated with the cosmetic industry for the past five years, takes over responsibility for

home and export sales of the com-

KIMBERLY-CLARK, LTD., Lark-field, Kent, have made the following appointments in the sales force of their consumer division: Messrs. K. Greyson, Northern area manager; F. Davis, selected account manager; G. Grover, London division manager; B. Lawrence, Eastern division manager. G. Throp, North-east division manager; K. Bradley, supervisor, North-east division; T. Payne, supervisor, Eastern division; K. Tucker, supervisor, London division; A. Hughes, supervisor, South-east division; R. Lumley, supervisor, North-east division; J. Smith, administration manager; B. Nicol, supervisor, Scottish division; S. Whyte, Scottish division manager and B. Mitchell, supervisor, North-west division.

OVERSEAS VISITS

MR. W. D. MASSEY, M.P.S. (overseas sales manager, Ayrton, Saunders & Co., Ltd.), left London on September 13 to visit Sudan, Ethiopia, East Africa, Rhodesia, Mozambique, Mauritius and South Africa. Mr. Massey's return journey will include visits to Angola, Congo, Cameroons, Nigeria, Ghana and other West African States, finally visiting Spain before returning to England at the end of the year. Principally he will be meeting the company's agents whilst investigating the possibility of increasing overseas trade in those particular territories

PERSONALITIES

MR. C. A. WRIGHT, who recently graduated B.Pharm. after study at Sun-

derland technical college, has left for Africa to serve with the Voluntary Service Overseas Organisa-tion. Mr. Wright, who will be working as a pharmacist at a Uganda Government hospital not far from Lake Victoria, is the second son of Mr. John



Wright—formerly proprietor of a pharmacy in Castlegate, Penrith, Cumberland, and now in charge of Messrs. W. P. Monkhouse's Cornmarket pharmacy, Penrith. The V.S.O., which is in part Government-sponsored and in part financed by business interests in the United Kingdom, has been in existence for about six years. Its purpose is to provide specialist trained assistance for developing countries. Mr. C. A. Wright (probably the only pharmacist going out with the graduate division of the organisation, which is composed mostly of teachers) will be working only for pocket money and his keep (the usual conditions under which V.S.O. members serve).

MR. R. DEADMAN, M.P.S., Mixenden, Halifax, Yorks, and a friend recently took to the Lake District for several days a party of thirty boys who

had never had a holiday. Friends met most of the cost. Less pleasurable to Mr. Deadman has been the dismissal by the Minister of Housing and Local Government of his appeal against Halifax Corporation's refusal to allow a Tudor front to be given to his pharmacy at 20 Bull Green, Halifax. Such a frontage was held to be out of keeping with adjacent architecture.

PROFESSOR M. F. A. WOOD-RUFF, this year's Conference lecturer, was born in Abelian the United Kingdom and educated in Abelian the graduated in Malbauran and prosticed in Malbauran surgery and practised in Melbourne. After the 1939-45 war he returned to Sheffield and later became a Fellow of the Royal College of Surgeons of England. He decided to take a position in Aberdeen and then later migrated to New Zealand where he held a chair of surgery at the University of Otago in Dunedin for three years. He returned to the chair of surgical science, University of Edinburgh, where he now couples his duties with important duties in the Royal Infirmary of Edinburgh. He is a leading authority on the transplantation of tissues and organs and on the immunological aspects of cancer. He was a leader of the Medical Research Council Research Group on the experimental and clinical problems of transplantation and in 1960 carried out the first successful kidney transplantation performed in Great Britain.

MARRIAGES

FIFE—MAY.—At the Fisherman's Chapel, St. Brelade, Jersey, recently, Jeffery Kenneth Fife to Anne Patricia May, B.Sc., A.R.C.S.T., M.P.S., Milngavie, Scotland.

THOMAS — VAUGHAN - WIL-LIAMS.—At Bath Street Presbyterian Church, Aberystwyth, recently, Mr. Richard Noel Thomas, B.Pharm., M.P.S., Aberdare, to Miss Ann Vaughan-Williams, B.Pharm., Llanon, Cardigans. Mr. and Mrs. Thomas will live at Cheltenham.

DEATHS

FARQUHARSON.—At his home in Brighton Road, Sutton, Surrey, recently, Dr. John Farquharson, aged fifty-nine. Dr. Farquharson was a consultant with the Beecham Group of companies in their pharmaceutical division and was formerly director of research at the company's Brockham Park, Surrey, laboratories, where he worked on the synthetic penicillins for about four years before retiring.

GALLAGHER.—On August 30, Mr. Charles William Gallagher, M.P.S., 5 Norman Road, Northfield, Birmingham, 31. Mr. Gallagher qualified in 1931.

HARTNEY.—Recently, Mrs. Mary Paul Hartney, M.P.S.I., 17 Barrington Street, Limerick. Mrs. Hartney qualified in 1922.

MARSH.—Recently, Mr. Frederick James Roy Marsh, M.P.S., 2 Maclise Road, London, W.14. Mr. Marsh qualified in 1940.

RANKIN.—At Royal Berkshire Hospital, Reading, Berks, on September 10, Mr. Irvine Giles Rankin, B.Sc.,

A.R.I.C., F.P.S., D.B.A., The Ashtree, Wargrave, Reading, aged seventy-six.

WILLIAMS. — At Caernarvonshire and Anglesey General Hospital, Bangor, on September 10, Mr. Arthur Ivor Williams, 8 Castle Square, Caernarvon, aged fifty-seven. Mr. Williams who had been in business in the town for many years was a member of the Caernarvon borough council.

WORMALD.—Suddenly, on September 4, Mr. A. Wormald, who represented Chesebrough-Ponds, Ltd., Victoria Road, London, N.W.10, in the Sheffield and West Riding areas.

SHEARER.—On September 10, Mr. Ian McPherson Ross Shearer, 16 Melville Street, Pollokshields, Glasgow, Mr. Shearer qualified as a chemist and druggist in 1924 and retired in 1956.

PRICE MAINTENANCE POLICY

Statements by companies and organisations

THE following have announced their intention of claiming exemption from the Resale Prices Act, 1964, for all their products or as stated:—

ASHE LABORATORIES, LTD., and other companies in group, Kingston Road, Leatherhead, Surrey.
BEECHAM PROPRIETARY MEDICINES, St. Helens,

The British Drug Houses, Ltd., Graham Street London N I

Street, London, N.1.
COTY (ENGLAND), LTD., Stratford Place, London, W.1.

LIGA FOOD PRODUCTS (U.K.), LTD., 23 Saxby Street, Leicester, Liga 3-way food; gluten free

PHILLIPS YEAST PRODUCTS, LTD., Park Royal Road, London, N.W.10. Phillips tonic yeast.

NICHOLAS LABORATORIES, LTD., and BRITISH SCHERING, LTD., 225 Bath Road, Slough, Bucks. Universal Laboratories, Ltd., and British Alkaloids, Ltd., Sandwich, Kent.

A.B.P.I.

The Association of the British Pharmaceutical Industry will register medical and pharmaceutical products in accordance with the provisions of the Resale Prices Act, 1964, for manufacturer members who have requested that the Association should act on their behalf.

It is understood that the National Pharmaceutical Union is asking its members in England and Wales and also Chemists' Defence Association members in Scotland and Northern Ireland to find out from manufacturers their policy regarding R.P.M.

In response to inquiry as to the position which Boots, Ltd., are to adopt in regard to the Act the company state that as the broad effect of the Act is to abolish R.P.M. except where exemption is claimed and eventually granted by the Courts, "we accept it, and respect it" as the law of the land. The statement adds: "Some manufacturers and some trade associations have already declared their intention to seek exemption for their products and Boots are among them. Pending the hearing of their claims, manufacturers may continue to enforce R.P.M. Boots will respect that right and will maintain the prices of their own proprietary specialities. On the other hand some manufacturers (e.g., Gillette) have declared directly and many others indirectly that they have abandoned R.P.M. The products of those manufacturers no longer have a fixed retail. facturers no longer have a fixed retail price and the prices for them can only be established by the normal processes of competition. Our entire business depends on the goodwill of our customers and this we have won by good service and real value for money. We are determined to retain this goodwill by the same policy. Where price reductions can be made on lines which are not price-maintained we are making them and will continue to do so.

TRADE NOTES

Correction.—The retail price of the box of twelve assorted Bathjoys illustrated on page 271 of last week's issue is 5s. and not as stated.

Discontinued.—Wallace Laboratories, Ltd., Wear Bay Road, Folkestone, Kent, have discontinued marketing Dormex in the United Kingdom.

To Retailers Only.—The British Drug Houses, Ltd., Graham Street, London, N.1, state that the specialities of Cuxson, Gerrard & Co.. Ltd., for whom they were recently appointed distributors (see C. & D., August 29, p. 192), are being supplied only to retail pharmacists (not to wholesalers).

Prices Reduced.—LEDERLE LABORATORIES division of Cyanamid of Great Britain, Ltd., Bush House, London, W.C.2, announce that the price of Aquamox quinethazone tablets is being reduced on October 12.—PFIZER, LTD., Sandwich, Kent, announce a reduction in price for preparations of Terramycin (Pfizer brand of oxytetracycline), Tetracyn (Pfizer brand of tetracycline), and Sigmamycin (Pfizer brand of tetracycline/oleandomycin). The new reduced prices take effect from October 12.—NICHOLAS LABORATORIES, LTD., Slough,

Bucks, are also reducing the prices of their Ambramycin products from October 12.

Distributors of a Speciality. — An announcement concerning Jergens hand lotion in last week's issue of the C. & D. unfortunately omitted the name of the distributors of the product in Britain. They are of course Food Brokers, Ltd., Crown House, Morden, Surrey.

No Change.—J. T. Davenport, Ltd., Union Street, London, S.E.1, point out that there have been no changes in the conditions of sale of Dr. J. Collis Browne's chlorodyne. The Poisons List Order, 1964, the Poisons Rules, 1964, and the Dangerous Drugs Act, 1964, have not affected the poisons status of the preparation.

A Good Blackcurrant Season.—After what is described as a bumper black-currant crop, H. W. Carter & Co., Ltd. (a member of the Beecham Group), are offering special price reductions in Ribena blackcurrant drink during the coming autumn and winter. On special offer packs there will be "fourpence off" the 12-oz. bottle and "sixpence off" the 18-oz. ("family-size") bottle.

Stolen Perfumes Warning.—Gloucestershire Constabulary state that in a recent raid on the pharmacy of C. & P. James, Ltd., 29 The Promenade, Cheltenham, thieves stole perfume to the value of £1,100, together with £20 in cash. Most of the stolen perfume can only be obtained through agents and is not handled by wholesalers. Police ask any chemist who is offered such a "job" lot to contact his local police. The stolen perfume, mainly small numbers of each presentation, was from ranges issued under the following trade marks:—Caron, Christian Dior, Chanel, Lanvin, Marcel Rochas, Lubin, Worth, Millot, Carven, Marquay, Guerlain, Jean Patou, Lancome, Balenciaga, Givenchy, Balmain, Revillon and Maggy Rouff.

Bonus Offers

Allen & Hanburys, Ltd., Bethnal Green, London, E.2. First-step Haliborange offer now withdrawn.

LTD., Tackle COLGATE-PALMOLIVE, LTD., 76 Oxford Street, London, W.1. Tackle Gel. Fourteen invoiced as twelve (in-

troductory offer).

Cuxson, Gerrard & Co., Ltd., Oldbury, Birmingham. Aidex, Dentosine, Sanoids mouth-wash tablets, Eupinal, Gynopax tablets, Thermoid cream, Minster brand, Sanoid dusting powder,

Sanoid Baby powder, cream, and soap, Tussola, Healo, and G.P. soap. One per doz. free on minimum 1-doz. per size order, for three doz, or more of one item or assorted. Minimum £5.

MACARTHYS, LTD., Chesham House, Chesham Close, Romford, Essex. Syrup of honey pine. 5 per cent. bonus on order for 3 doz.; 7½ per cent. on order for 6 doz.; 10 per cent. on order for 12 doz.

MENTHOLATUM Co., LTD., Slough, Bucks. Deep Heat. Thirteen 3s, 9d. size invoiced as twelve; seven 5s. 9d. or 7s. 9d. size invoiced as six. Mentholatum balm. Thirteen invoiced as twelve. Until October 31.

NEW PRODUCTS AND PACKS

FOODS

Now Nationally Available.—Sales of Gerber baby products which have been on restricted sale in certain areas of England and Wales (see C. & D., July 18, p. 57), are now being launched nationally by the Gerber division, Brown & Polson, Ltd., Bercsford Avenue, Wembley, Middlesex. In the United States, where the Gerber products originated the Gerber products originated the Gerber products. ducts originated, the Gerber company have five manufacturing plants and claim a 56-per cent. share of the U.S.



\$3 millions baby food market. In addition to the license agreement in Great Britain, there are agreements for manufacture and sale of the foods in Japan, Venezuela, France and Western Germany. The company has set up the Gerber Baby Council with offices at 10 New Fetter Lane, London, E.C.4 (telephone: Fleet Street 2180). Formed to give an advisory service to mothers on all aspects of infant and child feeding, it will also run an information service for members of the medical profession and others concerning infant feeding problems in general, and the use of Gerber baby foods in particular.

OVER-THE-COUNTER MEDICINALS

Cough Linctus.—Macarthys, Ltd., Chesham House, Chesham Close, Rom-Ltd.. ford, Essex, announce the introduction of a new adult cough linetus, Syrup of honey pine, combining codeine and pholeodine in a demulcent syrup whose usefulness is further enhanced by the addition of volatile decongestants. Marketed through pharmacies only, the product is issued in a counter disbox containing 1 doz. 2-oz. play bottles.

For Teenagers' Spots.—Knox Laboratories, Ltd., 46 Hertford Street, London, W.1, announce the availability of

a new product Facsil (pronounced Faysil), a non-greasy, antiseptic ointment which they recommend for the external treatment of spots and pimples, acne, minor burns, cuts and abrasions, and rashes arising from dandruff. The ointment is also understood to give relicf from the effects of eczema and psoriasis. The product is being backed by national Press advertising aimed at the teenage market.

Against Men's Spots and Pimples.-The pharmaceutical division of Colgate-Palmolive, Ltd., 76 Oxford Street, London, W.1, have introduced a new medicated clear gel that assists in clearing spots, pimples, blackheads and acne in men. Non-greasy and invisible on the skin the product, which has been given the name Tackle, goes on like an after-shave lotion. It is being heavily advertised in the Press and on Radio Luxembourg.

COSMETICS AND TOILETRIES

In New Plastic Box. — The "regular" fingernails of Eylure, Ltd., 60 Bridge Road East, Welwyn Garden City, Herts, are now available in a new plastic box like that for the Slimline fingernails introduced earlier in the year, but in a pink sleeve outer to differentiate between the two types. The sleeve allows the nails to be viewed through the transparent lid of the container.

Hair Conditioner.—Nutress "Living Hair," which received mention in the Sunday Express on September 13, has been marketed for some years NuTress Laboratories, Inc., Holly-wood, California, U.S.A. It has been used extensively in hairdressing salons, and many hairdressers noticed that, after handling the product, their nails were in better condition than before. The matter was investigated by the manufacturers, who found the organic protein content responsible. From that result Proteinail was born. It has been distributed for some time in Britain by Jackel & Co., Ltd., Shuna Place, Maryhill, Glasgow, N.W., who are now marketing "Living Hair" conditioner in a 2-oz. pack. To develop the product an associate Company, NuTress Laboratories, Ltd., has been formed, which will manufacture Proteinail, "Living Hair," a protein shampoo and a hair-styling lotion (the last two to be launched in Britain shortly). Nutress "Living Hair" is understood to act in

the way that a fine hormone cream would treat the skin. It is stated to penetrate the hair shaft, assuring an even distribution of active ingredients and eliminating the over-porosity caused by bleaching, tinting, cold waving, over-exposure to sun, wind, water, etc. "The penetration takes place in 5-10 minutes and the beneficial result is immediately apparent." Nutress "Living Hair" is used as a general reconditioner and may be used as often as desired. The packet is a 2-oz, jar.

Now Nationally Available. — Formerly available in Britain on a small scale, Badedas, a Continental "spa" bath additive, is now available on a national scale. Taking its name from the spa Baden Baden, in the Black Forest of Germany, where it is made, Badedas contains as active ingredients the vitamins A, E, F, H, and panto-thenic acid and extract of horse-chestnut, and chlorophyll. Badedas can be



used in different ways, but is probably best as a foam bath. Badedas is available as one- and five-bath tubs; as ten-, twenty-five- and seventy-five-bath bottles. British distributors: George Spencer & Sons, Ltd., Kynance Place, Gloucester Road, London, S.W.7.

INFORMATION WANTED

The Editor would appreciate information about: Prophylactic dental paste, ASU Liverpool Bronchephyilin Malek moth proofer



Inecto House 27 Dover Street London W 1 Hyde Park 754

ecto Hint of a Tint

kilfully blended luxury shampoo plus a tle hint of colour, for regular weekly . Retail price 1/2d a sachet. olesale price 8/- a dozen plus P.T.

illable in an attractive counter display er, complete with colour selector, ch contains 1 dozen of each of the

olesale price 40/- plus P.T.

o available in new, 2-oz. economy tles. Retail price 4/- per bottle. olesale price 27/- per dozen plus P.T. artons of 3 2-oz. bottles—all one shade. olesale price 6/9d plus P.T.

Inecto Hair Magic

An easy-to-use semi-permanent colour-ing available in three series—Shampoo, Brush-On and Fantasy Series. The Brush-On has been created to cover and colour hair up to 50% grey and to restore colour to faded hair. Retail price 3/6d.

Wholesale price 2/- per bottle plus P.T.

Inecto Hi-Lift

The lanolised ultra bleach for lightening and brightening the hair or for white bleaching. Retail price 3/6d per carton. Wholesale price 2/- per carton plus P.T.

Inecto Crème Hair Lightener

A soft, gentle cream which lightens the hair 3 to 4 shades and leaves it in superb condition. Retail price 3/6d per tube. Wholesale price 2/- plus P.T.

Inecto Rapid

A permanent, non-fading liquid tint giving 100% coverage on any amount of grey or white hair. Retail price 4/8d.

Wholesale price 2/8d per carton plus P.T.

Inecto Colour Crème

A permanent, non-fading colouring in cream form which gives 100% coverage on grey or white hair. Retail price 6/4d. Wholesale price 3/7d per carton plus P.T.

Inecto Crème for Men

A permanent, non-fading colouring in 6 sensibly masculine shades. It gives 100% coverage on any amount of grey or white hair. Retail price 6/4d.

Wholesale price 3/7d per carton plus P.T.

Inecto Four-in-One

which lightens, brightens, colours and conditions in one application. Ideal for covering grey or white hair Retail price 4/8d.

Wholesale price 2/8d per carton plus P.T.

Inecto Hair Colour Stain Remover

An instant-action hair colour stain removes with a delightful perfume. Retail price 2/11d per bottle. Wholesale price 6/8d per carton of 4 plus P.T.

Inecto

Shampoo Hair Colour Remover

An instant hair colour remover for semi-permanent and temporary colourings. May also be used as a lacquer remover. Retail price 2/11d per bottle. Wholesale A permanent, non-fading, oil-based price 6/8d per carton of 4 plus P.T

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Lastonet offer a complete range of surgical foundation stockings for the prevention and relief of varicose veins, all supplied under the N.H.S. These are backed up by a *complete* service to you.

ORDER FORMS We will give you a supply of measurement forms for Lastonet stockings, enabling your customers to obtain quickly and accurately the best possible answer to tired, aching legs.

TAILOR-MADE STOCKINGS WITHIN 3-5 DAYS All Lastonet elastic net stockings are made to measure to ensure comfortable, even support, and are supplied within 3-5 days of receipt of the order.

DEPT C.D.9

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REDRUTH, CORNWALL

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POST FREE SERVICE – whatever your requirements, no charge for postage is made.



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Free showcard to bring Lastonet stockings to your customer's attention



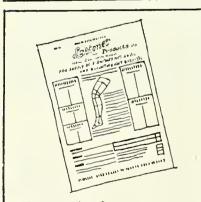
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TELEPHONE: CENTRAL 6565

A Sense of Proportion in Science

PHARMACEUTICAL science embraces many disciplines and ranges widely over many fields. It was therefore in keeping that the chairman of the British Pharmaceutical Conference meeting in Edinburgh should speak on many topics during his address at the opening session of the Conference (p. 283).

Dr. Mitchell's speech, reflecting his open mind and delivered in his own inimitable style, touched upon many matters that were almost poignantly important in pharmacy today. While his decision not to deal with the chemistry of natural products may have caused disappointment to some of his hearers, Dr. Mitchell's call for more fundamental studies of drug action, rather than for more direct searching for new drugs, is a challenge that must sooner or later be taken up. The approach is one that the pharmaceutical industry itself must seriously consider and indeed adopt, if only to avoid criticisms from a public unversed in technicalities.

Many among Dr. Mitchell's audience appreciated his "middle-of-the-road" attitude to some of the claims advanced for "tailor-made chemotherapy," and echoed his remarks upon the hazards resulting when new discoveries are too quickly and too widely communicated. Most pharmacists can provide evidence from their own experience of the problems that arise when patients, almost upon hearsay, demand treatment with drugs that are only in their first stages of clinical trial.

The Conference chairman's reference to dismay at, and panic action upon, the reports of some toxicologists working in the field of food additives was also relevant and opportune. Some of the high dosages administered in certain animal feeding tests appear to have had little relationship to the practical circumstances in which the materials under test are to be used in everyday life. Such "accelerated toxicity tests," as Dr. Mitchell neatly called them, may well be both misleading and alarmist. It might prove as profitable to carry out extended tests in substantiation or otherwise of side effects that are hypothetical as it is proper to withdraw a drug immediately real and dangerous but hitherto unsuspected side effects have made themselves manifest.

Upon the questions he was discussing, Dr. Mitchell brought to bear the sense of proportion he was advocating. That was shown in his comments on the problems of cigarette-smoking and lung cancer. After pointing out that more than 23,000 people in the United Kingdom died of that condition in 1962, he made the supportable declaration that "If any medicinal chemical or food additive were even suspected of killing 23,000

people a year, there would be national panic." He was not, of course, arguing that food manufacturers should be given the licence to risk slaughter on that or any-scale.

Only when he came to the final topic in his speech, perhaps, would Dr. Mitchell have found among his audience a substantial element of dissent for his ideas - namely when he came to question whether there had ever been a real shortage of scientists in Britain and when he suggested that much first-class scientific brainpower had been dissipated on routine or scientifically unrewarding activities. "Pharmaceutical and other chemists" employed as technical representatives might, he conceded, be doing a necessary job, but many could, he alleged, be more usefully employed in actual scientific work. Rather fewer pharmacists might clash swords with him over his reminder that, while the increased number of university places now being provided could result in a general lowering of standards, there is a still unfilled need for an increased output of technologists and technicians. They could, as he pointed out, be provided at a lower level than graduate status and at a less expenditure of public money.

In those remarks, Dr. Mitchell thus highlighted a problem that remains controversial in pharmacy today, for the policy of the Society in demanding a graduate standard as a prerequisite for registration continues to be questioned in many quarters. What does the public good really necessitate? Perhaps here as much as anywhere a sense of proportion is the indispensable requisite of the moment in arriving at an answer.

100 YEARS AGO

DROPS

From the C. & D., September 15, 1864

On turning to the subject of drops, as treated of in "Parrish's Practical Pharmacy," or any other standard pharmaceutical work, we cannot help being struck with the great difference observable in the relative size and weight of the drops of different fluids. Thus, although we are always taught that a fluidrachm contains on an average sixty drops each of which is equal to a minim or a grain sixty drops, each of which is equal to a minim or a grain, we find it stated in Parrish, on the authority of Durand, that a fluidrachm of distilled water, hydrocyanic acid, or weak ammonia, contains only forty-five drops, or in other words that a drop of either of these substances is one-third greater than it is generally supposed to be. In the case of other fluids the discrepancy is in the opposite direction for instance, a drop of crystallizable acetic acid, diluted alcohol, tincture of opium, and several other liquids used daily by the pharmacist, is only half the supposed size. A patient, therefore, who is prescribed acetic acid in drops gets less than the supposed quantity, while the one who is ordered hydrocyanic acid by the same measure would get more than the proper amount.

According to the same authority, the bottle or measure from which the liquid is dropped has a great influence on the size of the drops. Thus, according to Parrish's experiments, seventy-three drops of acetic acid dropped from a pint tincture bottle made up a fluidrachm, while 102 drops were necessary when a minim measure was used. These differences seem to show the difficulty of obtaining a standard drop—a difficulty which is still more increased by the knowledge that even when the same same vessel and liquid are used the differences are almost as great as those already cited. Thus, in experimenting on water with ounce vials, Parrish found that in seven trials the number of drops required to make up a fluidrachm varied between thirty-two and sixty-five. The necessity, therefore, for Professor Guthrie's investigations is at once apparent.

The Professor sets out by defining a drop as any mass of liquid matter whose form is visibly influenced towards the spherical by the attraction of its parts, and whose

sensible motion or tendency is towards the earth.

Correspondence

Letters when received must bear the name and address of the sender, not necessarily for publication. The Editor does not hold himself responsible for the views expressed.

Another T.U.C. Wanted

Sir,-My response to the Resale Prices Act is: Let all employers affected by the Act arrange for a 10, 15 or 20 per cent. cut in all wages. would be in line with the Govern-ment's "ostensible" ambitions to cut the cost of living and so could hardly be opposed by them. No doubt the Trades Union Congress would have other ideas! An immediate nation wide strike would result and Mr. Edward Heath would be obliged to think again. Why should only one think again. Why should only one section of society be expected to suffer a lowering of living standards whilst almost all the other sections are fighting for and getting more and more money for doing less (if possible) work? The answer is only too obvious. Retailers are, in the main all too individualistic. Lacking unity they are an easy target for governmental experiments. It's high time a Traders Union Council ("T.U.C." new form) was brought into being so that on such occasions we could say and mean it: "No thank you, Mr. Heath."

E. A. Poots, Larne, N. Ireland

Acting Advertising Agents

SIR,—As to substitutes for certain "sold anywhere" well known brands of medical products, my firm has none (see C. & D., September 5, p. 223); but I am finding that pharmacists have increased, very much, their orders for newer and similar products to me. This is most gratifying as I realise from previous retail experience that the mere suggestion to a customer of something better, new and a little cheaper perhaps, often influences the sale, if not at the time, the "seed" is sown for subsequent sales. Most pharmacists, since they are asked so much for advice, do not realise how good advertising agents they are. They have been used in this way in the past and let-down very badly. I am now using them again with the assurance of no let-down and if they would only realise that they are the people the drug manufacturer largely depends upon, then they as a whole could do a little dictating for a change.

Another Representative N.I.

Not Privileged

SIR.—In reply to the letter from "A Representative" who I noted does not have the courage to give his name, I would say no, we pharmacists do not consider ourselves a privileged class at all but we do reserve the right to spend our money in the way we wish and if that means not supporting firms who sell products to supermarkets, etc., that is our business. Far too many representatives today enter our shops with the attitude that they are the privileged ones and are doing us a good turn by selling the goods to us! It may well be that the winds of change are blowing

through the pharmacy world, but I recommend "A Representative" and others with similar ideas to beware lest they themselves be swept away by the same "icy blast." Regarding his comments about own brand substitutes for the lines he mentions (I would not advertise them by mentioning them by name again!), if I couldn't supply own brand preparations at least as good as, if not better than, most of those I would hand in my certificate and take up another occupation.

H. STURGESS MILLS, Manchester

Earthy Realism

SIR, — Despite what Mr. C. H. Patrick (C. & D., September 5, p. 223) and Mr. N. H. Radcliffe (August 29, p. 193) say, I maintain that pharmacy can do safely without those who have no fight, no endeavour, but a weary, desolate ivory-tower withdrawal attitude into the nebulous lofty heights of isolationist professionalism. Pharmacy cannot do without the earthy realism of chemists like Mr. S. B. Ryan, or the far-secing policy of Boots, Ltd., whose conception of a departmentalised efficient service should be the basis of modern pharmacy. The idea of an unending chain of "own goods" products is as archaic as a cavalry charge nowadays. The only way to survive is by carrying the fight "into the enemy's camp," so to speak and fight him for every article he sells.

H. D. JARDINE, Coventry

SIR,—If your correspondents like Mr. Jardine are compelled to sell nylons and cheap jcwellery to earn a reasonable living one can only feel sorry for them and advise them to apply for a post as manager with the "Rolls" brigade (to usc Mr. Ryan's term). However, as this seems most unlikely, surely such astute businessmen should have entered the fish and chip or meat trades, where they would enjoy a much larger profit margin than in pharmacy and have little capital tied up in stock. They could then, maybe, add a yacht and a moon rocket to their Rolls!

HUMBER SCEPTRE

"By Any Other Name"

SIR,—An article in the Daily Telegraph on September 7 headed "Chemists will fight to keep R.P.M." quotes a statement made by Mr. C. D. W. Stafford (a vice-chairman of the Proprietary Association of Great Britain). Mr. Stafford, who is also the only pharmacist director of the Reecham group says:

Beecham group, says:

"We shall make two main points in the case which we are presenting to the [Restrictive Practices] Court. First, that medicines are bought when they are needed, and not because they happen to be cheap today, Either you have a headache or you haven't. Secondly, a full range of medicines must be available in the chemist's shop, not just those which have

the quicker sale. If a retailer is going to give the appropriate service, he must stock a complete range. He must lock up his money in these things. That is why we feel our margins must be maintained."

Notice carefully the change from "chemist's shop" to "if a retailer"—it is significant. In the Grocer's Gazette dated September 5, there is a full page advertisement for Setlers. The copy says: "The Beecham Proprietary Medicines range of family medicines is the largest and most comprehensive available to you. Stock Beechams Family Medicines, and you enjoy the big advantages of dealing with the biggest company in the field. Whilst hoping that the P.A.G.B. will be successful in their case for R.P.M., I am sure that their case would be much stronger if Messrs, Beccham were to limit their distribution to the retail chemist, Can we ever hope for this, Mr. Stafford?

FRANK BREAN, London, S.E.15

Those "Inducements"

SIR,—I feel that I must write to support E. C. Tenner in his comment support E. C. Teinfel in his confinent (C. & D., September 12, p. 250) on the offers of free medicines by various firms which on the surface appear to give lip service to professional discernment and action. What he was referring to does seem to me to be another twist to last year's scheme so far as Allen & Hanburys, Ltd., are concerned. After the Vick incidents I am sure that Messrs, A. & H. were left with large stocks of unwanted "free" samples coupled with the fact that last winter was mild enough for the overall demand for the product concerned to be small. Is it not obvious that it was the larger size which dragged its feet and some bright boy has thought up the scheme for killing two birds with one stone? It is this attitude that is so exasperating today in pharma-ceutical circles. We get advertisements with no mention of retail prices, and in some cases not even a hint of formula, and those incredible thirteen for twelve, twelve for eleven offers. There is no bonus until the last tube or item is sold. Is it not time that we refused such offers except on a cash basis and that we became much more suspicious about all "offers." I notice an advertisement in your same issue "exclusive chemists' 1s. 6d. pack." This is "half-truth" advertising that is so misleading. May I also sound a note of warning about a new line in baby foods now being rapidly peddled with the theme: "Oh we always give the chemist priority over the grocer." Chemists in this area have given orders recently on this basis and have found in the same week that the same foods were on cut-price offer already in a supermarket not twenty miles away from the town in which I am living.

G. W. TREVOR, Dringhouses, York

Pharmaceutical Society of Ireland MONTHLY MEETING OF COUNCIL

N earnest appeal to all pharmacists to attend the coming annual Irish Pharmacy Week was made at the September meeting of the Council of the Pharmaceutical Society of Ireland. "The Organising Committee has put a considerable amount of hard work into arranging an interesting and well-balanced programme and I am quite sure it will stimulate interest in the practice of professional pharmacy," said Mr. T. R. MILLER, remarking that he would like all pharmacists to make a point of attending in order to give pharmacy "the impetus it undoubtedly re-

quires. It needs this injection."

Agreeing, Mr. M. MULREANY said some pharmacists found it difficult to provide suitable cover in their absence. Much satisfaction was expressed when a letter was read from the Department of Education stating that the Minister (Dr. Hillery) had agreed to formally open the College of Pharmacy extension on October 12. MR. F. WALSH said that although the Council had advanced £200 towards Pharmacy Week, rising costs would probably absorb much of it. He added that the Committee would welcome the loan of specie jars for exhibition. They could be forwarded to Mr. Boyd.

MR. F. LOUGHMAN suggested that each local association should appoint a delegate to be present. "It is regrettable that the majority of those attending the annual meeting are from the Dublin area," he said.

Organisers Commended

THE VICE-PRESIDENT (Mr. J. O'Donnell), who presided, said the Council was deeply appreciative of the work put into the organising of the event by the Irish Pharmaceutical Association and members of Pharmacy Week Committee. He hoped all pharmacists would co-operate to make the Week an outstanding success. Mr. D. W. P. Boyd (organising secretary) wrote thanking the Council for its grant.

Reporting that the warble-fly eradication scheme had been initiated in the five North-western counties, Mr. V. G. MCELWEE said that at a meeting in Sligo the pharmacists in the area had agreed to participate in the scheme. The A.I. (artificial insemination) Centre had invited the cooperation of the pharmacists. It was also agreed at the meeting that only one particular product would be used and the firms marketing the two preparations were urged to get together and solve the question of distribution as well as give an undertaking that they would not encroach on each other's territory. "In the scheme Dyvon will be supplied through the chemists but it will be on sale only through the A.I. official. I think it is a good scheme. At least it is a big improvement on last year. We have been told that pharmacists will get favourable publicity out of this scheme." Stating that he considered it very important that the rest of the country should participate in the scheme, if possible, he said the official in charge of the A.I. arrangements had told them that no animal would be produced for sale in the counties concerned unless bearing a certificate of having been dressed. Mr. CASHMAN: You say the preparation is only sold to the A.I.?—Mr. McElwee: Yes.

Mr. Cashman: Do you mean to say a private chemist is debarred from purchasing if he elects not to participate in the scheme? — MR. McElwee: When you sell to the A.I. you get 120 certificates with each case. The marts have been informed that no animals should be offered for sale without the certificates. Mr. R. J. Power said he had hoped that when the scheme was completed there would be a unified approach by pharmacists throughout the country. The North-western area had now been included but he had hoped there would have been a standard approachotherwise pharmacists might find themselves at loggerheads.

Mr. LOUGHMAN said he had heard of a pharmacist who had been asked to tender for the supply of Dyvon and Ruelene and had been told that another pharmacist in the area had already offered to supply at 5 per cent, off list price. "In other words, there is something in Mr. Power's fears."

Mr. O'Donnell said they had first considered the scheme in 1963, and the message the Council had tried to get across to members was that they should organise for this year's scheme. "We had word from Mr. McElwee in July. As a Council we considered our responsibility had finished in the matter and passed it over to the Irish Drug Association (I.D.A.). When it came to the marketing the chemists were not organised, with the result that they are now being asked to participate at a 6 to 8 per cent, profit while the A.I. gets the rest.

"We in Mayo cannot give our blessing to the scheme; £600,000 of the preparation is going to be bought this year and that would be good for the pharmacists if they could get a fair percentage but they were not organised. I would not be deluded by what has happened in the North-west. I think it is deplorable."

A "Good" Scheme

MR. McElwee: So far as we are concerned I think the scheme is good. It is much better than in the rest of the country. At least it is not being supplied through the creameries but through the pharmacists. We had since last November to organise and it is not the fault of those in the North-west that the country is not organised. Mr. O'Don-NELL: The pharmacist is still free to sell the product. Pharmacists can do so individually or as a group and they will not have the overhead administrative expenses of the A.I. Mr. McElwee: The A.I. have the blessing of the

Mr. O'DONNELL said that if the I.D.A. and the people marketing the product had arrived at a profit margin last March pharmacists heard nothing about it until they were faced with a coup and it was announced that the A.I. were going to undertake the scheme. "We were all up in arms against the veterinary surgeon but he was not mentioned at all this year." Mr. MILLER said at least they had now secured the preparation through the chemists and the profit was entirely a commercial aspect. If the I.D.A. were satisfied with 6 per cent. that should be the finish of the matter. "I think it is deplorable but there you are."

MR. R. J. SEMPLE said he had urged all pharmacists in his travels through the country to call meetings of local associations to discuss the position and he thought the matter had been settled. Mr. O'Donnell: There was no

local organisation.

A letter was received from the Department of Education stating that the Minister had decided to sanction a grant not exceeding £11,000 in aid of the College of Pharmacy towards pharmaceutical education for the financial year 1964-65. The letter added: "It is desired to inform you," however, that in coming to this decision the Minister was influenced solely by the consideration that the grant is intended as a temporary measure to assist the Society in providing the additional accommodation, equipment and services as well as the extra teaching staff which the extended academic course in the College entails. The Minister wishes it to be clearly understood that the grant is not related to any question of making good deficits in the running expenses of the College."

The question of the pharmacist's prescription fee was raised and it was agreed to discuss the matter with representatives of the Irish Medical Association (I.M.A.) at a meeting to be held shortly. The Council has already ap-

pointed a deputation to meet representatives of the I.M.A. to discuss matters of mutual interest.

THE REGISTRAR recalled that some doctors had commented adversely on the fee being charged by pharmacists for prescriptions. Mr. LOUGHMAN said pharmacists should be adequately rewarded for the work and responsibility involved, MR, WALSH thought the matter was one to be discussed with the I.D.A. THE REGISTRAR said a meeting had been held on July 27 between representatives of the Council and of the I.D.A.

Plea for Caution

MISS L. CUNNIFFE said several British pharmacists had told her they were not receiving anything approaching adequate payment under the Health Service and were gradually cutting out the pharmacy end of the counter trade as it was not paying. Irish pharmacists should be slow to enter into any scheme until satisfied of the terms. Mr. WALSH said his impression was that the British pharmacists were doing quite well. They should go ahead with the I.D.A. and draft out a scheme. Only when they had seen the replies to the questionnaires sent out by the Practice of Pharmacy Committee to members would they fully realise the true position in pharmacy, Mr. HARTY said pharmacists were giving a specialised service, and giving it cheaply, and Mr. Cashman said their time and responsibility towards the State must be reimbursed, MR, O'Don-NELL said they could have every confidence that the delegation which would soon meet the I.M.A. representatives would present their case with conviction.

Messrs R. J. Power and Walsh were appointed scrutineers in the event of a contest taking place when the new panel to the Council came up for election next month, On the motion of Mr. Cashman, seconded by Mr. Loughman it was decided to extend the Council's best wishes to the retiring president of University College, Dublin (Dr. Michael Tierney), THE REGISTRAR stating that Dr. Tierney had proved most co-operative when the Council were negotiating the Degree course. Messrs. Cashman, Loughman and H. P. Corrigan associated themselves with the remarks.

A Purchase for the Society

THE REGISTRAR reported that he had purchased from an antique dealer a valuable souvenir—the medal of the Society engraved with the name of "William Nassau Allen, President 1886-87." He was the third President of the Society. He also reported that a draft recommendation regarding the rôle which pharmacists could play in the proposed central sterile unit for a group of Dublin hospitals had been drawn up by Mr. R. J. Power and Dr. Timoney and a copy forwarded to Dr. Coleman Burns who was in charge of the proposed scheme. On the motion of MR. MILLER, seconded by MR. O'DONNELL, the Council's thanks were extended to Mr. Power and Dr. Timoney.

That the Registrar's letter to pharmacists advocating a more rigorous observance of the Poisons laws was an "excellent one and had focused attention on the responsibilities of members without waving the big stick" was stated by Mr. MILLER who suggested that a further letter be circulated to assist pharmacists in interpreting the complicated lists. The fact that members were interested in complying with the regulations was borne out by the number of calls received by the Society and the I.D.A. from those seeking guidance. THE REGISTRAR said that the matter was under constant review and the Committee specially appointed to draft the guide were at present engaged on another memo which would assist pharmacists by listing the poisons alphabetically, with cross-sections.

Messrs. Corrigan and Mulreany assured him that Comhairle na Nimheanna had now recommended to the Minister that hospitals and dispensaries should observe the special labelling requirements.

Pharmacists engaged in the practice of pharmacy were

exempt from Jury service, the Registrar told Mr. Mulreany. No other category of the profession was relieved of the responsibility of such service. MR. CAHILL (assistant registrar) told Mr. Walsh that forty-seven replies had so far been received to the questionnaire sent to pharmacists by the Practice of Pharmacy Committee. It was stated that there was no obligation on pharmacists to sign their names to the questionnaire so that their anonymity would be preserved, and MR. WALSH urged all who had not replied to do so immediately to give a representative picture.

On the motion of MR. O'DONNELL a vote of sympathy was passed with former member Mr. Kevin Banks, on the death of his brother, Sean.

The members present were:—Messrs, M. L. Cashman, H. P. Corrigan, Miss L. Cunniffe, J. Gleeson, T. J. Harty, F. Loughman, T. R. Miller, M. J. Mulreany, V. G. McElwee, G. C. O'Neill, T. B. O'Sullivan, M, Power, R. J. Power, R. J. Semple, F. Walsh.

At a meeting of the Benevolent Fund which followed sums totalling £41 were passed for payment.

Register Changes

The following changes of address were noted:—Mrs, Mary E, O'Carroll, L.P.S.I., to Ashley Crescent, Athlone, co. Westmeath. S. Downing, L.P.S.I., to 197 Gloucester Place, London, N.W.1. E. N. Kinirons, M.P.S.I., to 6 Warburton Drive, Hale Barns, Altrincham, Ches, S. MacHale, M.P.S.I., to 11 Palmerston Road, Rathmines, Dublin, 6.

J. C. Nolan, M.P.S.I., to 2 Station Road, Portlaoighise. P. P. O'Reilly, M.P.S.I., to Avenue Road, Dundalk. P. Smith, M.P.S.I., to 41 Beechpark Road, Foxrock, co. Dublin, L. Wilson, M.P.S.I., to 27 O'Connell Street, Ennis, co. Clare. Patrick F. Cullen, L.P.S.I., to 182 Upper Drumcondra Road, Dublin, 9. Francis Doyle, L.P.S.I., to 47 Suir Road, Kilmainham, Dublin Dublin.

Elected to membership were:—Mrs, Mary O'Brien, 7 Main Street, Skibbereen, co. Cork; Maurice A. O'Connell, Main Street, Swinford, co. Mayo; Joseph O'Dea, 2 Main Street, Finglas, Dublin, 11; and John E.

Mayo; Joseph O'Dea, 2 Main Street, Finglas, Dublin, 11; and John E. Burrell, 16 Errigal Road, Drimnagh, Dublin.

Granted registration in the Pharmaceutical Chemists' preliminary register were:—Kalidas Harricharan, P.O. Box 47, Tongaat, Natal, South Africa; Patrick J. McIntyre, Banagher Street, Cloghan, co. Offaly; Denis J. Hickey, Main Street, Rush, co. Dublin; John M. J. Dwyer, 34 Priom Sraid, Caiseal Muman; Aidan A. Carvill, 55 Mt. Prospect Park, Clontarf, Dublin, 3; Owen I. Corrigan, 80 Malahide Road, Dublin, 3; Kevin F. Kelly, Laragh, Streamstown, co. Westmeath; Donald S. A. Leavy, Medical Hall, Castleblayney; Idris Mall, Glencoe, South Africa; Catherine M. O'Donnell, Brooklands, Tralee, co. Kerry; Mary E. Whiriskey, Ardrahan, co. Galway; Elizabeth L. Kingston, Sunlea, Clonakilty co. Cork: Niamh M. O'Brien, 588 Howth Road, Raheny, Dublin; Catherine M. O'Donnell, Brooklands, Tralee, co, Kerry; Mary E. Whiriskey, Ardrahan, co, Galway; Elizabeth L. Kingston, Sunlea, Clonakilty, co. Cork; Niamh M. O'Brien, 588 Howth Road, Raheny, Dublin; Catherine A. M. Ward, Main Street, Ballybay, co. Monaghan; Owen F. Reynolds, 2 Broad Street, Limerick; Maurice A. P. Mallen, Jarnac, Sutton, co. Dublin; Bridget M. T. Quigley, Trinity Place, New Ross, co. Wexford; James F. Flanagan, Bridge Street, Headford, co. Galway; Philomena M. Walsh, Lyre, Farranfore, co. Kerry; James C. Pettit, The Medical Hall, Clara, co. Offaly; Ciaran Harie, Williamstown House, Longford; Margaret E. Shannon, Dunfanaghy, Letterkenny, co. Donegal; Michael J. M. Duffy, College Road, Swinford, co. Mayo; Cyril G. Walshe, St. Therese, Park Road, Swinford, co. Mayo; Mary J. Woulfe, 41 Eglinton Road, Donnybrook, Dublin, 4; David J. Brennan, 3 Blessington Road, Naas, co. Kildare; Catherine P. M. Cashman, Dunkerron, 75 Whitehall Road, Dublin; Marie T. Walshe, Bawnmore, Lismore, co. Waterford; Roisin M. Gilsenan, 12 Prince Arthur Terrace, Rathmines, Dublin; Jeremiah G. Houlihan, St. Joseph's, Castleconnell, co. Limerick; John J. O'Hare, Muckross, Mount Avenue, Dundalk; James P. Browne, 2 Landscape Road, Churchtown, Dublin; Evelyn V. Hurson, 11 Nutley Road, Ballsbridge, Dublin, 4; Nora M. C. O'Keeffe, The Pharmacy, Dingle, co. Kerry; John P. K. Horkan, 61 Cromwellsfort Road, Walkinstown; Enda G. Flynn, Newtown Street, Castlebar, co. Mayo. Mrs. Mary E. O'Carroll (née Joyce), L.P.S.I., was granted change of name in Registers a marriage certificate having been submitted

Mrs. Mary E. O'Carroll (née Joyce), L.P.S.I., was granted change of name in Registers, a marriage certificate having been submitted.

The Licence Certificates of Elizabeth V. Casey, James Brosman, Denis G.

Murphy, and Patrick O'Sullivan were signed and sealed.
Dr. Louis Chevny was registered as a pharmaceutical chemist, on
L.A.H. certificate having been submitted. Mr. Francis Doyle, L.P.S.I.,
47 Suir Road, Kilmainham, Dublin; Mr. Denis G. Murphy, L.P.S.I.,
61 Upper Drumcondra Road, Dublin, 9; and Mr. Alexis J. Fitzgerald,

104 Forey Road, Constraint Dublin, 14 were nominated for L.P.S.I., 104 Toney Road, Goatstown, Dublin, I4, were nominated for membership.

The following were granted registration in the Pharmaceutical Assistants' The following were granted registration in the Pharmaceutical Assistants' Preliminary Register:—Miss Monica A. Perry, 13 Lindsay Road, Glasnevin; Miss Loretto S. Murphy, The Medical Hall, Abbeyfeale, co. Limerick; Miss Edith C. Payne, Bracknell, Beaumont Park, Ballintemple, Cork; Miss M. T. D. Sammon, Townsend Street, Birr, co. Offaly; Miss Marguerite Finn, 48 Church Street, Howth, co. Dublin; Miss G. M. Webb, St. Patrick's Street, Castlerea, co. Roscommon; Miss Katherine A. Farrell, Crossinstown, Ballivor, co. Meath; Miss Margaret C. McParland, Stephen Street, Dunlavin, co. Wicklow.

The Registrar reported on the deaths of Mary Paul Hartney, L.P.S.I.; Teresa Young, M.P.S.I.; Daniel J. Browne, M.P.S.I.; John B. Cronin, M.P.S.I.; Hugh J. McDevitt, M.P.S.I., and James McKeever, M.P.S.I.

International Pharmaceutical Congress

PHARMACISTS OF THREE DOZEN COUNTRIES AT AMSTERDAM

THE twentieth General Assembly of the Federation of International Pharmacists and twenty-fourth International Congress of Pharmaceutical Sciences took place in Holland's capital city, September 7-12.

IN his remarks as president at the opening session, SIR HUGH LINSTEAD thanked the Minister of State for Education, Arts and Sciences (Mr. T. H. Bot) for being present, thereby encouraging Congress members and showing the interest the Dutch Government took in the work of the profession. In the various countries too many contacts with Ministers of Health were unfortunately dominated by finance. That seemed inevitable, for modern medicine was so costly.

To the Rector of the University (Dr. J. Kok) Sir Hugh offered special thanks for his presence both in that capacity and as chairman of the organising committee of the Congress. He also mentioned specially the work of the

secretary (Mrs. Visser).

Sir Hugh said he was happy to report that 1964 found the Federation in good shape. He drew particular attention to the wide-ranging symposium upon sterilisation and the report by Dr. Hans Meyer on the abuse of medicaments. The reason why the public had such faith in modern drugsthe knowledge that they were powerful -was the reason the modern habit of turning to them in every circumstance of life could be dangerous. Medicine shared that responsibility with pharmacy and with governments. Between them they had to discover the causes of the resort to the tranquilliser on the one hand and the stimulant on the other and then to educate the public to their dangers.

Pharmacy in most countries found itself caught in a tide of industrialisation, commercialisation and State control, which made its existence as an independent profession everywhere precarious. No one was actively seeking that result. Most people-Ministers, industrialists, and the public—would wish to restrain the process by all practictogether the industrialist, the pharmacist in general practice, the pharmacist who was in some degree a functionary,

able means. One of the most valuable Congress features was that it brought



W. Hadgraft (Chief Pharmacist, Royal Free Hospital) with Dr. H. Davis (Chief Pharmacist, Ministry of Health).

and those who were responsible for the education of pharmaceutical students. Out of exchanges of ideas each group obtained a better understanding of the needs and responsibilities of the others. (See also C. & D., September 12, p. 242.)

Some of the papers presented to the full Congress or sections will be the subject of reports in forthcoming issues THE CHEMIST AND DRUGGIST. The present state of the Federation, and plans for the future, were the subject of reports presented at the general assembly on September 10 and 11.

Reorganisation Proposals

The Council of the F.I.P. at its recent meeting in Warsaw considered possible reorganisation of the annual meetings to meet the situation that the sections are assuring a more important rôle than the ordinary members. National societies make a more limited contribution, but that is not considered a reason for abandoning the national basis F.I.P.'s constitution. Owing to the dynamic development of some sections, which continuously demand more facilities at the General Assemblies, pharmacists concerned with general practice find their opportunities inadequate. A better balance might be achieved by alternating an Assembly year (meetings of bureau, council, steering committees of sections, commission for general practice and other commissions; meetings of general assembly and of sections). Its programme would be, in general, confined to professional questions of interest to national associations, the sections, the commission for genpractice and the subcommission T.P.O. All congressists would participate in the sessions, and a Congress year (Congress of Pharmaceutical Sciences, organised by the Scientific Section. Activities distributed over specialised sections of the Congress. There might be additional sections for scientific or technical papers contributed by military, hospital or industrial pharmacists. No professional subjects would be discussed. A day might be reserved for meetings of the steering committees of sections). Members of Council present gave general approval to the analysis, but Sir Hugh Linstead announced that subsequently other suggestions were put forward which make it wise to give further consideration to the subject of reorganisation before arriving at any decision.

The Bureau decided to propose to the council at Warsaw that it should approve a strengthening of the secretariat and to prepare a proposal for an increase of subscriptions.

Reports

The treasurer reported that expenses of the Federation increased during 1963 from D.Fl.57,270 to D.Fl.62,183.40, mainly owing to an increase under "salaries," of travelling expenses and of the Journal Mondial de Pharmacie. Total income of the Federation for 1963 was D.Fl.68,397. D.Fl. 2,500 that had been set aside to subsidise the Commission of Pharmaceutical stracts had not been made use of. Total income from contributions in 1963 from ordinary and associate members was about the same as in 1962. The 1963 budget showed a credit balance of D.Fl.6,214.59. The amount is being added to F.I.P. capital.

The president announced that the Australasian Pharmaceutical Guild had applied for admission at the full amount of the new fee, and that Hungary was being admitted as an associate member. The Pharmaceutical Society of Japan had sent a message of good wishes and the information that an Association of Asian Pharmaceutical Associations was being formed. For the first time the Pan-American Federation of Pharmacists was represented, and once again the director of the pharmaceutical division of the World Health Organisation (M. Paul Blanc)

was attending.
On the Bureau, Mr. Frank Arnal was being elected for a further four-year term. Professor Schau and Mr. Krause were retiring under the eight-year rule.





Their places were to be taken by Mr. Alberto Ortiz, Spain, and Professor Z. Blagojevic, Jugo-Slavia (the first woman member). Mr. Frank Arnal was giving up the presidency of the retail section, his place being taken by Mr. Georg Petrus, Austria.

Some discussion on the price of the tickets showed that there were two schools of thought on the subject. One group favoured a high "basic" card, with remissions for early leavers, young people and students, and perhaps excursions considered as separate costs. Others thought that that might create a "second-class membership," which would be undesirable.

MR. KENNETH HOLLAND, Great Britain, urged that only précis of the papers should be read at the sessions, thus providing more room for discussion, but SIR HUGH LINSTEAD gave costs of translation, which militated against universal circulation of full texts in three languages beforehand, and "human nature," which often caused



"ACCOMPANYING" MEMBERS OF CON-GRESS: Mrs. C. Malloch (wife of the pharmacist-in-charge, 248 Maintenance Unit, Royal Air Force, Chessington, Surrey), with Mr. A. and Miss E. Malloch at the Rijksmuseum, Amsterdam.

papers to be sent in at the last minute, as reasons why that might be impracticable. He thought it a duty for national organisations to subsidise younger members' attendance, perhaps by offering it as a prize for competition. He thought Mr. Petrus wise in warning against a two-level membership, and considered the subscription should be at a level that left F.I.P. independent of subsidies from industry. Numbers of those attending showed no sign of diminishing. "We grumble but we come." Members had really, he thought, been voicing their reactions to inflation. He was doubtful if the costs of tickets could be much reduced without reducing the value of the Congress.

MR. J. BLOOMFIELD, Great Britain, announced that the Pharmaceutical Society of Great Britain was offering an extra voluntary payment to the subscription at the new increased level.

PROFESSOR KLAUSE, Poland, pressed

for a decreased charge for Congress membership.

MR. W. K. FITCH, in his report as editor of the *Journal Mondiàle de Pharmacie*, said it was proposed to increase the subscription rate from \$4 to \$6 in 1965 to meet increased costs.

SIR HUGH LINSTEAD announced from the platform that the next Congress of

Pharmaceutical Sciences would be helin Prague, Czecho-Slovakia, in August 1963 and the next general assembly in Madrid, Spain, in 1966. The Council of Europe was being asked about its proposals for a European Pharmacopoeia, and Dr. Apple was being asked to present a report on the place of pharmacy in health education.

MANUFACTURER/PHARMACIST CONTACTS

Plea for greater exchange of information

IN a paper on "Professional Relations Between Manufacturers and Pharmacists in General Practice," given before the general practice section, Mr. Frank Arnal, France, urged greater co-operation between them in the matter of information. The substance of the paper is here broadly given:—

THE growth of the speciality is such that both manufacturer and practising pharmacist have much varied information to disseminate daily. Neither manufacturer nor the pharmacist can follow all the current commercial methods. The most important communications between manufacturers and pharmacists are not the business ones but the technical ones, that is to say exchange of information, documentation, and instructions for use, both scientific and practical, which will enable both of them to achieve in the best possible way the service of the sick person.

Medical documentation is in general well done and abundantly distributed. The pharmaceutical documentation of some manufacturers is often, except for an "announcement of birth," limited to indications of name and price. It could be said the pharmacist often learns of the existence of a new product from the medical prescription. He has no notion of its therapeutic properties, dosage, or forms. Instead the pharmacist should receive information before the launching of the new speciality and the information given should be complete (to give indications of formula, dosage or therapeutic use is insufficient; the card should carry information about mode of action, conditions of absorption, antidotes—all items of information which are indispensable to a professional pharmacist). It must be clear and it would be better standardised. The pharmacist is in great difficulty when faced with different sizes of leaflets, different colours, dif-ferent methods of editing. It would be unfair to pass over in silence the initiative shown in this field by various public or private professional bodies, among others the Ordre National des Pharmaciens in France and the Pharmaceutical Society of Great Britain, which both regularly issue cards announcing new specialities — cards designed in an almost identical way. All have the merit of being clear and easy to classify and to consult:

Packaging

As to the product itself and its presentation, manufacturers would do well to take account—where they do not already do so—of the labelling of products whose method of administration is precise or limited to a single method (any other method being dangerous). Even if the method of administration is not strictly defined, it is advisable to indicate the most usual method, without prohibiting others, whilst at the same time observing the labelling laws of each country.

Specialities are arranged on shelves to take up as little space as possible. Yet, thus arranged, the name must be visible—a small detail that pharmacists ask manufacturers to take account of. Pharmacists would like information on the package enabling the number of units of the usual dose in the container to be easily calculated.

Naming

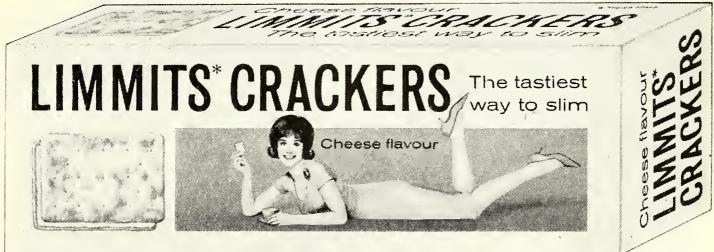
Sometimes the same speciality appears in different forms but in packs identical in appearance, volume, colour and printing. There is no wish to condemn the practice certain manufacturers follow in using the same colours or same type for their specialities to preserve a "family likeness." But excess of standardisation of that kind can be dangerous as it multiplies the chances of confusion, notably when the same product presented in the same pharmaceutical form is intended for different methods of administration (tablets to be swallowed and tablets for gynæcological use).

Increasingly the laws of numerous countries oblige the pharmacist to add to the package of certain products some necessary manuscript information. The information is important as representing an element of control for the pharmacist; it also informs the sick person about dosage—which he has perhaps not clearly understood when consulting the doctor, or which he might find difficult to understand from reading the prescription. The packaging of the product must allow the pharmacist sufficient space to comply with statutory requirements.

International Aspect

The taste for travel and consequent movement of large numbers of people have had their inevitable repercussions on the practice of pharmacy. Each year there is an increasing demand for pharmaceutical specialities which the foreigner finds in his own country and of which he is astonished not to be able to find at least the equivalent. But often the product demanded is in the pharmacy but under a different name, even though coming from the same manufacturer: Example: Loraga in France; Agarol in Spain. An index that listed products under all their names would be welcome and of the greatest service. The problem has been passed to "Press and Documentation."





THE TASTIEST WAY TO SLIM

New cheese flavour Limmits Crackers are the crispest, crunchiest slimming aid ever.

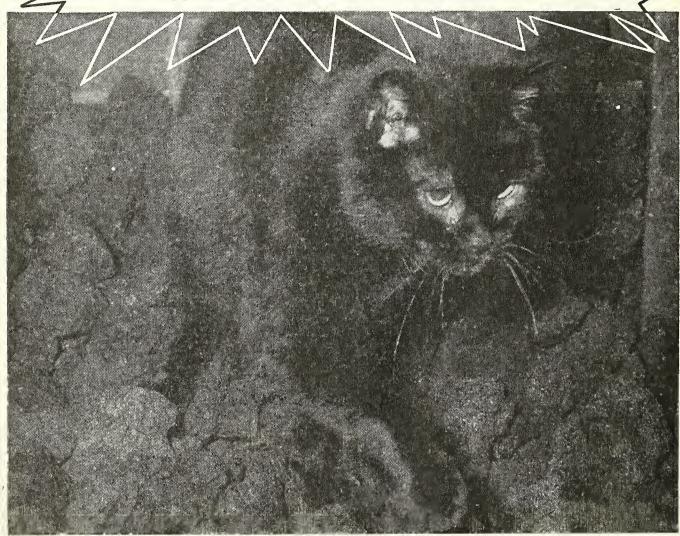
Advertising breaks 26th September. Remember the Limmits launch?

Full range of display material available.

STOCK AND DISPLAY NOW

UNIVERSAL LABORATORIES LIMITED, SANDWICH, KENT *Trade Mark

BLACK CAT IN COAL CELLAR to boost 'Photoflux' sales!



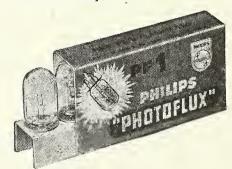
Big, bold whole-page advertisements in the top photographic magazines will be selling Philips 'Photoflux' flashbulbs fast this autumn and winter. Using dramatic pictures like the one shown here, these advertisements will show dynamically just what can be done with flash photography. And they promote the whole range of Philips photographic lamps, too!

HILIPS PROTOFUX? **FLASHBULBS**

give you more chances to use your cash-register!

BIG PRODUCTION SPEED-UP

Philips mean business with 'Photoflux'. They've doubled their production capacity to make sure that you'll get all the 'Photoflux' flashbulbs you order. So get ready for your biggest flash sales year — order fresh stocks of 'Photoflux' today.



PHILIPS ELECTRICAL LIMITED, LIGHTING DIVISION, CENTURY HOUSE, SHAFTESBURY AVENUE, LONDON, W.C.2

TRADE REPORT

The prices given are those obtained by importers, or manufacturers for bulk quantities or original packages. Various charges have to be added whereby values are in many instances augmented before wholesale dealers receive the goods into stock. Crude drugs and essential oils vary greatly in quality and higher prices are charged for selected qualities.

LONDON, SEPTEMBER 16. A slightly brighter trend was noted in some parts of the market during the week, though interest in CRUDE DRUGS was still

Dealers in Portuguese ERGOT have either sold their stocks or withdrawn their prices pending a more stable atmosphere at origin. The new crop is reputedly short and shippers were not inclined to offer. PERU BALSAM was sixpence per lb. dearer but the tone of Brazilian MENTHOL was again easier with prices down by sixpence per lb. throughout. Sarawak PEPPERS did not fully hold the gains of the previous weeks. Alexandria SENNA PODS continued firm despite further signs of a heavy Tinnevelly crop and offers have been marked down. SHELIAC was dearer but Carnauba waxes had an easier tone.

In ESSENTIAL OILS, some suppliers of PATCHOULI on the spot have withdrawn their prices, while others have sharply advanced the price by 5s. per lb. Chinese ANISE was ninepence lower at 10s. 9d. per lb. The hurricane which hit the citrus-growing parts of Florida and caused much damage recently has so far not affected Orange oil prices. Spearmint was up by a further one

shilling per lb.

PHARMACEUTICAL manufacturers notified the expected increases for MERCURIALS following the new high level for MERCURY published last week. During the past year the metal has practically doubled in price and is now almost touching the peak attained about a decade ago. Stocks in the United Kingdom and elsewhere are said to have fallen to low levels and there is considerable difficulty in replacing the stocks in the face of heavy world demand. ZINC OXIDE was reduced by £12 10s. per ton, making the B.P. grade now £131 10s. per ton in 2-ton lots.

Pharmaceutical Chemicals

Ammonium acetate. — Kegs (70-kilos), B.P.C. 1949, 8s. 1d. per kilo. Solution, strong, 3s. 6d. kilo.

AMMONIUM BICARBONATE.—B.P. powder £54 10s, per ton; CARBONATE, £83 10s. for lump and £87 10s. for powder. All in 1-cwt. free kegs.

Ammonium Chloride.—50-kilo lots pure powder, 2s. 1d. per kilo.

Ammonium nitrate.—Crystals, 1s. 8d. per kilo in 50-kilo lots.

Ammonium sulphate.—50-kilo lots, 2s. per kilo for B.P.C. 1934 grade.

BORAX.—B.P. grade, 1 ton and upwards:
Granular, £54 10s.; crystals, £58; powder,
£59; extra fine powder, £60 per ton, all in
hessian sacks. Less £1 for paper bags.
Commercial from £44 10s. to £51 per ton
as to type and packing. Anhydrous borax
is £60 per ton in hessian bags or £59 in
paper bags; carriage paid in Great Britain. Surcharges for small quantities:
Less than 1 ton but not less than 10 cwt.,
2s. per cwt.; 5 to 9 cwt., 4s.; 1 to 4
cwt., 8s.

BORIC ACID—B P. grade in 1 ton and

Boric acid.—B.P. grade in 1 ton and upwards (per ton): Granular, £84; crystals, £97; powder, £90 10s.; extra-fine powder, £92 10s. per ton in lined hessian bags, carriage paid in Great Britain. Less

£1 per ton if supplied in paper bags. Technical from £70 to £80 10s. per ton according to type and packing.

CAFFEINE.—HYDRATE in 50-kilo lots and over 28s. 1d. per kilo; CITRATE, 20s. 11d.

CHARCOAL. — Medicinal activated, B.P.C. in 1-cwt. lots, £22 10s. per cwt.

CREAM OF TARTAR.—Home-trade:—One-ton lots, 241s, per cwt.; 10-cwt., 242s.; 5-9-cwt., 243s.; 2-4-cwt., 244s.; 1-cwt., 245s. (If supplied in bags deduct 5s.)

GLYCERIN.—Chemically pure B.P.:-

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	Ov	er	an	đ	and	d	Und	ler	
	25 tons		und	er	und	er	1 ton		
			25 to	ons	5 to	ns			
TANK WAGONS	5.	d.	5.	d.	<i>S</i> .	d.	s.	d.	
10-14 tons	176	0	1 —	-	-	- !	_		
5-10 tons	177	6	179	6	_	.			
Drums									
5 cwt.	180	0	182	0	185	0	191	0	
2½ cwt.	182	6	184	6	187	6	193	6	
TINS									
56 lb.	184	0	186	0	189	0	195	0	
28 lb.	205	0	207	0	212	0	220	6	
14 Ib.	211	0	213	0	218	0	226	6	

Minimum delivery 1-cwt. Drums charged and returnable. Minimum terms for technical grade glycerin s.g. 1-2627 are 171s. per cwt. for lots of over 25 tons in bulk deliveries of 10-14 tons.

Lactates. — Calcium, B.P., 2s. 3d. per lb. in 5-cwt. lots and 2s. 4d. in 1-cwt. lots; Calcium sodium, 4s. 9d. and 4s. 10d.

MAGNESIUM CARBONATE. — One-ton lots: LIGHT, 129s. per cwt.; HEAVY, 135s. per

Magnesium chloride.—Crystals in 50-kilo kegs, 5s. 6d. per kilo.

Magnesium hydroxide.—B.P.C., 1-cwt. lots, 3s. 11d. per lb.; 1-ton, 3s. 6d. per lb.

Magnesium oxide, B.P.—Light, 1-cwt. lots, 3s. 10d. per lb., 1-ton, 3s. 7d.; HEAVY, 5s. 10d. per lb.

Magnesium Peroxide.—B.P.C. (15 per cent.), 3s. 11d. per lb. for 1-cwt. lots.

Magnesium phosphates: dihydrogen, 50-kilo lots, in kegs, 8s. 9d. per kilo; tribasic, in sacks, 9s. 8d. kilo.

MAGNESIUM SULPHATE. — B.P. in minimum 1-ton lots from £20 per ton. Exsiccated, £58 per ton.

Magnesium trisilicate. — (Per 1b.). Under 5-cwt. lots, 4s. 1d.; 1-ton, 3s. 4d.

MERCURY DERIVATIVES.—Rates (per kilo) MERCURY DERIVATIVES.—Rates (per kilo) for under 50-kilo lots—AMMONIATED MERCURY, B.P., powder, 84s.; PERCHLORIDE, B.P.C., powder, 70s.; SUBCHLORIDE (calomel), B.P.C., 82s.; OXIDES, yellow, B.P.C., 84s. 6d.; red B.P.C., 1949, 86s. 6d.; IODIDES, B.P.C., 1954 (25-kilo lots), 69s. per kilo

kilo.

PARAFFINS. — Prices to wholesale distributors per gall.—Liquid: Heavy, B.P., in drums, 8s. 8½d. to 8s. 9½d. as to quantity: over 500 gall. in bulk, 8s. 7½d. Light, B.P., drums, 7s. 1½d. to 7s. 2½d.; bulk, 7s. 0½d. Technical white: Light, 6s. 6d. to 6s. 7d. and 6s. 3d. in bulk; MEDIUM, 7s. 7d. to 7s. 8d., bulk, 7s. 4½d. Drums charged and returnable. Soft: Best grades White medium consistency, £116 15s. per ton and soft consistency, £113 7s. 6d. Yellow, £94 10s. Other grades (all B.P.) at £95, £100 10s., £106 per ton for white and at £74 17s. 6d. for yellow. All in non-returnable drums delivered. non-returnable drums delivered.

Paraformaldehyde.—B.P.C. is 1s. 3d. per lb. for 1-ton lots; 1s. 5d. per lb. for 1-cwt.

PHENAZONE.—Imported, 9s. 6d. per lb.

POTASH SULPHURATED. — Lump, B.P.C. 1959, 6s. 11d. pcr kilo in 50-kilo drums.

Potassium acetate. — (Per lb.) 1-cwt. lots, 3s.; 5-cwt., 2s. 8d.; 10-cwt., 2s. 6d.

POTASSIUM BICARBONATE.—B.P. powder, 110s. per cwt. 1-4-cwt. lots and 105s. per cwt. for 5-cwt. and over.

POTASSIUM BROMATE. - In 5-cwt. lots, 5s. 3d. per lb.

POTASSIUM CARBONATE. - 50-kilo kegs, 5s. ld. per kilo.

Potassium chlorate. — 50-kilo cases, 5s. 6d. per kilo.

Potassium Chloride. — Pure. 50-kilo sacks, 3s. 4d. per kilo.

POTASSIUM HYDROXIDE. — Pellets, B.P., 8s. 9½d. per kilo; sticks, 13s.; technical flake, 4s. All 50-kilo lots.

POTASSIUM 8-HYDROXYOUINOLINE SUL-PHATE.—1-kilo is 55s. per kilo.

Potassium metabisulphite. — Crystals, 50-kilo kegs, 3s. 4d. per kilo.

POTASSIUM NITRATE. - Pure in 50-kilo sacks, 2s. 1d. per kilo.

Potassium Permanganate. — B.P. in 1-cwt. lots, 2s. $0\frac{3}{4}$ d. per lb. Technical 218s. 6d. per cwt.; 1-ton lots, quoted at 207s. per cwt.

Potassium phosphate. — B.P.C. 1949, 50-kilo kegs of powder, 8s. 3d. per kilo; GRANULAR, 8s. 9d.

Potassium quadroxalate. — One-cwt., 3s. 6d. per lb.

POTASSIUM SULPHATE. - B.P.C. '49, 1s. 2d. per lb.

Potassium thiocyanate. — 50-kilo lots. 11s. 6d. per kilo in kegs.

PREDNISOLONE. — ALCOHOL and ACETATE from 7s. 6d. per gm.

PREDNISONE.—One-kilo lots, ALCOHOL and ACETATE, 7s. 3d. per gm.

QUINIDINE.—SULPHATE is now 745s. 2d. per 100-oz. for lots of 500-oz. and over; less than 500-oz. are 765s. 4d. per 100-oz.

QUININE. — 1,000-oz. lots: —ALKALOID, 4s. 7d. per oz.; Sulphate, B.P., 1963, 3s. 6d.; BISULPHATE, 3s. 5d.; DIHYDRO-CHLORIDE, 5s.; HYDROBROMIDE, 4s. 4½d.

Tannic acid.—The B.P. fluffy, 8s. 3d. per lb. (5-cwt. lots).

Theophylline.—12½-kilo lots; alkaloid anhydrous, 32s. 3d. per kilo and B.P., 33s. 3d.; aminophylline, 29s. per kilo, 33s. 3d.; AMINOPHYLL 12½ kilos, 31s. per kilo.

THEOBROMINE. — ALKALOID from 31s. to 36s. 6d. per kilo as to quantity;— CALCIUM SALICYLATE from 34s. 6d. to 39s. 6d. per kilo; and—SODIUM SALICYLATE, 31s. 6d. to 36s. 6d.

THIOGLYCOLLIC ACID. -- Basic rates per THIOGLYCOLLIC ACID. — Basic rates per lb., 97-98 per cent., 26-lb. packs, 15s.; 75 per cent., 11s. 6d. AMMONIUM THIOGLYCOLLATE, 40 per cent. ph 9-3 (24-lb. packs), 6s. 8d.; MONOETHANOLAMINE THIOGLYCOLLATE, ph 9-9, 4 per cent., 9s. 10d. All carriage paid United Kingdom and subject to purchase tax ject to purchase tax.

UREA.—Pharmaceutical grade, £59 15s. per ton in 1-cwt. bags non-returnable; technical quality, £41 5s. per ton (4-ton

ZINC CARBONATE. -One-cwt, lots, 2s, 0½d. per lb.; 1-ton, 1s. 9d.

ZINC CHLORIDE. — B.P.C. 1954, cake, 15s. 5d. per kilo; sticks, 17s. 3d.

ZINC OXIDE.—Two-ton lots, B.P. grade, are now £131 10s. per ton; 1 ton, £132 10s.

ZINC PEROXIDE. — One-cwt. lots of B.P. 5s. 3d. per lb.

ZINC SULPHATE.—B.P., 50 kilos, 3s. 6½d. per kilo.

Crude Drugs

– Spot, Spanish napellus, ACONITE. 2s. 8d. per lb.; shipment, 2s. 6d., c.i.f.

Aloes. — Primes, 255s. per cwt. spot. Shipment, 250s., c.i.f. nominal. Curação, spot, 270s.

Anise. — Chinese star, 140s. per cwt. spot, duty paid; f.a.q. for shipment, 112s. 6d., c.i.f.

BALSAMS. — Per lb.: CANADA: Spot 19s. to 23s. 6d. COPAIBA: B.P.C. grade, 9s. to 10s. Peru: Spot, 9s. 6d. Tolu: B.P., from 10s. 6d. to 27s. 6d.

BAY.—Leaves, 1s. 9d. per lb., spot

Buchu. — Spot value, 4s. 9d. per lb.; shipment, 4s., c.i.f.

CALAMUS. — ROOT, 100s. per cwt., spot, 87s. 6d., c.i.f.

CAMPHOR.—B.P. powder spot, 5s. 8d. in bond; shipment, 5s. 4d. per 1b., c.i.f.

CARDAMOMS. — Aleppy greens, 10s. 6d. per lb. spot; shipment, from 9s. 6d. to 10s. 8d., c.i.f., as to quality.

CHAMOMILE.—Belgian new crop expected to be higher at around 19s. per lb.

CHERRY BARK. — Thin natural, 1s. 9d. per lb.; shipment, 1s. $7\frac{1}{2}$ d., c.i.f.

CINNAMON. — QUILLS, Ceylon (per lb., c.i.f.): 4 O's, 9s. 2d.; single O, 7s. 4d.; quillings, 5s. 9d. Bark, Seychelles, 90s. cwt. spot.

CLOVES. — Zanzibar spot 2s. 10\fmathbb{d}. per lb. standard grade; shipment, 2s. 7d.,

DIGITALIS.—Purpurea leaves, 2s. 6d. per

ELEMI.—Spot, 1s. 11d. per 1b.; ship-nent: new crop, September-October, ment: new 1s. 6d., c.i.f.

ERGOT. — Portuguese, 10s. 6d. per 1b. spot nominal; shipment, 9s. 9d., c.i.f., nominal. East European, 8s. 6d. and 8s.

GENTIAN.—Root, 190s. per cwt. spot; shipment, 185s., c.i.f.

GINGER.—(Per cwt.) African, spot, 320s. per cwt. Jamaican No. 3 spot, 610s.; September shipment, 555s., c.i.f. Cochin for shipment, 370s., c.i.f.

GUM ACACIA.—Kordofan clcaned sorts, 167s. 6d. per cwt. spot; September-October shipment, 153s., c.i.f.

Henna. — Indian, for shipment, 66s.,

Honey. — (Per cwt.). Australian light amber, 135s. to 140s. and medium amber, 110s. to 115s. (October delivery); Argentine, 122s. 6d. to 127s. 6d.; Canadian, 175s.; Mexican, 125s. to 130s., all ex ware-

No. 1 f.a.q. gum, spot. KARAYA. 400s.; No. 2, 335s. per cwt.

Lanolin. — Anhydrous B.P. is from 1s. 10d. to 2s. 1d. per lb. in 1-ton lots delivered free drums.

Lemon Peel.—Spot, 2s. 3d. per lb.; partially extracted, 1s. 6d.

Linseed. — Whole, 72s. 6d. per cwt.; crushed, 110s.

LOBELIA. — Herb. Dutch on the spot, 4s. 6d. to 5s. 3d. per lb.; new crop, 4s. 6d.,

MACE.—Whole pale blade, 14s. 6d. per lb. on the spot. Shipment, 14s., f.o.b.

MENTHOL.—Chinese: spot, 24s. 6d. per lb., duty paid; shipment, 22s. 6d., c.i.f.; Brazilian, 19s. to 20s. as to brand, in bond and shipment, 19s. to 19s. 6d., c.i.f.

Mercury. — Sper flask of 76 lb. - Spot, ex warehouse £105

Nutmegs. — West Indian, spot, 80's, nominal; unassorted, 7s. 9d. per lb.; defectives, 5s. 3d. East Indian for shipment: 80's, 7s. 8d. per lb.; 110's, 7s. 3d.; b.w.p., 4s. 5d., all c.i.f.

Nux vomica.—Cochin, 75s. per cwt. on the spot; shipment, 47s. 6d., c.i.f.

Orange peel. — Spot: Sweet ribbon, 1s. 8d. per lb., bitter quarters: West Indian, 10½d.; Spanish, 1s. 9d.

PEPPER.—White Sarawak spot is 2s. $9\frac{1}{2}$ d. to 2s. $10\frac{1}{2}$ d. per lb.; shipment, 2s. 9d., c.i.f. Black Sarawak spot, 2s. $6\frac{1}{2}$ d., shipment, 2s. $3\frac{3}{4}$ d., c.i.f. Black Malabar is cleared on the spot; shipment, 320s., c.i.f.

PIMENTO. — Spot quoted at 60s. per cwt.; shipment, 600s., f.o.b.

Podophyllum.—Spot per cwt.; Emodi, 220s. (205s., c.i.f.); Peltatum, 200s.

Pyrethrum. — Extracts — partially dewaxed, 25 per cent. pyrethrins, 69s. to 65s. 6d. per 1b.; pale, 82s. 6d. to 79s.; crude oleoresin, 60s. 6d.

QUILLAIA. — Spot, 110s. per cwt.; shipment, 100s., c.i.f.

RHUBARB.—Good manufacturing, offered at 8s. 6d. per lb.; No. 1, 15s. 6d.

SAFFRON. — Mancha superior, 275s. to 280s. per lb., spot.

SARSAPARILLA. — Jamaican native red spot. 3s. per lb.; shipment, 2s. 9d., c.i.f. nominal.

SASSAFRAS. — Brazilian is from 2s. 4d. per Ib.

per lb.

SEEDS. — (Per cwt.) ANISE. — Spanish, 280s., duty paid. CARAWAY.—Dutch, 125s., duty free. CELERY. — Indian quoted at 160s., spot; shipment, 155s., c.i.f. CORIANDER.—Moroccan, 62s. 6d., duty paid; shipment, 46s., c.i.f. CUMIN. — Firm, Moroccan quoted at 250s., duty paid, shipment has increased to 235s., c.i.f., because of heavy American buying. DILL.—Indian unchanged at 90s., spot; shipment, 77s. 6d., c.i.f. FENNEL.—Indian, 165s., spot nominal; shipment now quoted at 150s., c.i.f. FENUGREEK.—Moroccan, 48s., duty paid; shipment firmer at 34s., c.i.f. MUSTARD.— English, 40s. to 57s. 6d., according to quality.

SENEGA.—Old crop, 18s. per lb. on the spot. New-crop for shipment, 17s., c.i.f.

Spot. New-crop for shipment, 17s., c.i.f.

Senna.—(Per lb.). Tinnevelly Leaves
spot: Prime No 1, 2s.; prime No 2,
1s. 8d.; No. 3, f.a.q., 1s. 2½d. Shipment:
No. 3, 1s. 1d., c.i.f. Pods: Tinnevelly,
hand-picked, 2s. 3d., spot; manufacturing
1s. 6d.; shipment, 1s. 3d., c.i.f. Alexandria
PODs: hand-picked in limited supplies at
8s. 6d.; manufacturing, small lots at from
3s. 3d. to 3s. 6d.

SHELLAC. — F.O.T.N., 215s. per cwt., No. 1, 245s.; F.O., from 255s. to 315s.

SLIPPERY ELM BARK. — Spot offered at 3s. 4d. per 1b.

SQUILL. — Italian new crop, 180s. per wt., spot; shipment, 170s., c.i.f. Indian, 75s. per cwt., spot.

STRAMONIUM.—Continental LEAVES 85s.

STYRAX.—Spot, 16s. per lb.; shipment, 14s. 9d., c.i.f.

Tonquin Beans.—Para, spot, 4s. 9d. per lb.; shipment, 4s., c.i.f.; Trinidad, 5s. 6d., spot.

Tragacanth. — No. 1 ribbon, £230 per cwt., nominal. No. 2, £215, nominal.

TURMERIC. — Madras finger offered at 150s. per cwt., spot; afloat, 147s. 6d., c.i.f.

VALERIAN ROOT. — Spot: East European, 175s. per cwt.; Indian, 175s. Shipment: Continental, 172s. 6d. to 214s., c.i.f.

Vanillin.—Rates (per lb.) are now:—5-cwt. lots, 21s. 6d.; 1-cwt., 21s. 9d.; 56-lb., 22s.; small quantities, 22s. 6d.

WAXES. — (Per cwt.): Bees'.—Dar-es-Sa'aam, spot, 450s.; shipment, 422s. 6d., c.i.f. Sudanese. spot, 400s., in bond; shipment, 395s., c.i.f. CANDELILLA, spot, 465s.; forward, 460s. landed. CARNAUBA, fatty grey spot, 360s.; shipment, 350s., c.i.f. prime yellow, spot, 760s.; shipment, 607s.6d. c.i.f. prime yellow, 697s. 6d., c.i.f.

WITCH HAZEL LEAVES.—Spot quotations are 2s. 2d. pcr lb.; new crop for shipment, 2s. 1d., c.i.f.

Essential and Expressed Oils

Almond.—Imported sweet oil is 7s. 3d. per lb., spot.

AMBER.—Rectified on the spot, 2s. per

ANISE.—Chinese, 10s. 9d. per 1b.; spot; shipment, 10s., c.i.f.

BAY,—West Indian about 25s, per lb on the spot.

Buchu.—Spot, 250s. to 360s. per lb. as to quality.

Cananga.—Spot offers are from 30s. per

Castor.—Home produced B.P. oil, spot, £147 per ton naked ex mill (2-ton lots).

Cassia.—Spot about 32s. per lb. for 80-

CHAMOMILE.—Small lots 640s, per lb.

CHENOPODIUM.—From 37s. per 1b.

CITRONELLA. — Ceylon spot, 8s. 3d., shipment, 7s. 9d. per lb., c.i.f. Formosan, in bond and shipment, 6s.; Chinese, 6s., in bond, 5s. 6d., c.i.f.

CLOVE.—Madagascar leaf spot, 7s. 4\frac{1}{2}d., per lb., duty paid; shipment, 6s. 1\frac{1}{2}d., c.i.f. Rectified, 10s. Distilled bud-oil, English B.P., 26s, per lb. for 1-cwt. lots.

CUBEB.—Spot supplies of imported are 86s. per 1b.

Dill.—Imported is about 39s. per lb., spot, for Dutch oil.

FENNEL.—Spanish sweet, spot, 13s. per

GERANIUM. — Bourbon, 87s, 6d. to 92s, 6d.; Moroccan, 57s, 6d. per lb. on the spot.

JUNIPER. — B.P.C. is nominally 30s. per 1b. JUNIPER WOOD, from 5s.

LAVENDER.—Spot, from 40s. per 1b. as

LEMON.—Sicilian from 17s, to 27s.

NUTMEG.—East Indian B.P. oil is about 40s. per lb. English distilled, 65s.

OLIVE. — Spanish, £205 to £220 per metric ton f.o.b. Spanish port. Spanish oil spot, £260 to £270 per long ton ex wharf.

Palmarosa.—Shipment, 52s. 6d. pcr lb. c.i.f.; spot, 52s. 6d.

- Penang is 32s. 6d. duty PATCHOULI. paid and 32s. 6d., c.i.f. per lb.

PEPPERMINT. — Arvensis: Chinese spot and shipment, 7s. 9d. per lb. Brazilian spot and shipment, 7s. 2d., c.i.f. Piperita: Italian, 48s. to 60s., spot; American from 31s. per lb. as to make.

PIMENTO. — English-distilled berry from 200s, per lb. and imported, 32s. 6d. Rectified leaf, 22s. per lb.

PINE. — Pumilionis, 30s. per lb., sylvestris, 9s.; abietis, 15s.

SAGE. — Spanish, 16s. 6d. per 1b., duty paid nominal; Dalmatian, 18s. 6d.

Sandalwood, — Mysore, 106s. 6d. per lb., spot. East Indian for shipment, 106s., c.i.f.

SPEARMINT.—American oil on the spot, 27s. per lb.

TANGERINE.—Sicilian best quality about 40s. per lb.

VETIVERT. — Bourbon spot, 85s. to 97s. 6d. per lb.

YLANG YLANG, — Best oil quoted about 135s, per lb.

UNITED STATES REPORT

NEW YORK, SEPTEMBER 15: Warm weather in recent days helped sales of CITRIC ACID and other materials used in "soft" drinks. Demand for antibiotics is reported as better than normal for this period. No quotable changes in crude drugs were noted. Ceylon CITRONELLA OIL moved down 10 cents to \$1.45 a lb.

THE DRUG WORLD IN AMERICA

Bulletin on events and trends in pharmacy, the industry and the Administration.

DR. RUDOLPH SEIDEN

THE pharmaceutical profession in the United States opposes physician ownership of pharmacies because the highest quality of pharmaceutical service can be provided most economically only when pharmacists are free to develop, manage and control their own professional practices. That was the stand-point of the American Pharmaceutical Association at their 101st annual meeting held before an audience of 4,000

in New York recently.

But Dr. N. A. Welch (president,
American Medical Association) told
the convention that widespread liaison programmes between medicine and pharmacy were needed to explore the controversial question. He said progress has been made in that direction and at least ten State medical associations were planning to hold medicinepharmacy conferences on that subject

in the near future at the State level.

He also pointed out that "AMA's Principles of Medical Ethics" provided that "drugs, remedies or appliances may be dispensed or supplied by the physician providing it is in the best interests of the patient." Thus, Dr. Welch concluded, it was not unethical for the physician to own or operate a pharmacy, provided there is no ex-ploitation of the patient. After all, when one takes the position that it should be unethical, per se, for a physician to own a pharmacy, one is logically questioning his right to own a hospital or nursing home—or in the final analysis, to practising medicine itself.

"Unethical Practices"

A few days after the A.Ph.A. meeting, on August 14, the association's executive director (Dr. W. S. Apple) testified before the subcommittee on antitrust and monopoly of the Committee on the Judiciary of the U.S. Senate, when it concluded two weeks of ownership hearings: "Rebates, percentage leases, physician ownership of repackaging firms and physician ownership of pharmacies, are all cut from the same cloth—a shroud which covers up practices which are inimical to the public interest. They all are unethical and should be so branded," Dr. Apple told the senators. Referring to efforts by the A.Ph.A. to resolve the physicianownership problem with the A.M.A., Dr. Apple assured the subcommittee that efforts would continue since the professions have the primary responsibility of protecting the public interest in these professional matters. Some physicians have found 'ownership' a ... sophisticated way of profiting from their prescribing activities, imprinted prescription blanks, coded prescription orders, direct telephone lines and other contrivances virtually assure that all patients of the physician-owner will patronise the pharmacy of the physician's choice. The patient is an unknowing captive of a monopolistic design," he said. Dr. Apple then showed, by example, how physician groupcould practices in clinic facilities create arrangements between physicians and pharmacists under which patient was exposed to economic exploitation. He noted that "business management groups" were encouraging physician ownership of pharmacies to amortise the cost of a group medical building by including a pharmacy, convincing physicians that pharmacy profits could carry the building cost load. This group has most effectively opposed efforts by A.M.A. leaders to resolve the interprofessional problem of physician-ownership, he added. Dr. Apple concluded: "This Committee will have performed a most useful function. if the Congress . . . makes it perfectly clear that efforts . . . to enfore a code of understanding . . . in the public interest will not be a violation of the antitrust law.'

A Third Drug Class Situation

Former Congressman C. T. Durham, a pharmacist by profession, who had much to do with drug legislation and now is special legislative adviser to the A.Ph.A., warned the association that the proposed bill on drug reclassification would get nowhere unless Congress believed that pharmacists were ready to assume the responsibilities entailed. "If we can't prove to the Congress and the public that the pharmacist is competent, then we don't have to worry about the question." And he added, "I believe that the pharmacist of today is more than competent to carry out the responsibilities." Mr. Durham reported that most of the questions he had received about reclassification involved what drugs would fall into what category and whether the pharmacist would be exposed to additional liability.

Further Conference Topics

Mr. F. T. Mahaffey (secretary, National Association of Boards of Pharmacy) emphasised that on-the-job pharmacy training under the guidance of a retail pharmacist was one of the most important educational experiences a young pharmacist could have. He recommended that each student take an internship under a "druggistpreceptor." He also stated that without exposure to pharmacy retailing it was difficult to give students a real picture of buying and selling procedures or administrative functions.

Among the resolutions voted on and accepted by the A.Ph.A. House of Delegates were the following:

Vigorously pursue legislation to re-

classify drugs. (See above.)

Develop a veterinary pharmaceutical programme to improve the relationship between pharmacists and veterinarians and veterinary drug manufacturers. Proposed by the author (Dr. R. Seiden).

Develop a code of understanding on the distribution and dispensing of professional samples.

Other resolutions called for encour-

aging pharmacist participation in the affairs of health councils and to educate young adults on the hazards of cigarette smoking.

Unsuccessful was a proposal which would ask for legislation to restrict proprietary drug sales to pharmacies. Such legislation would ban over-the-counter sales in such outlets as the grocers and department stores, nursing homes, etc.

Warning Statements

The Food and Drug Administration report that following the conclusions of an advisory committee they are to recommend that the label and labelling of all phenacetin-containing preparations bear a warning statement to the following effect: "This medication may damage the kidneys when used in large amounts or for a long period of time. Do not take more than the recommended dosage, nor take regularly for longer than ten days without consulting your physician."
The F.D.A. has also decided that

scopolamine or scopolamine aminoxide preparations for insomnia should include the following warning: "Not to be used by persons having glaucoma or excessive pressure within the eye, by elderly persons (where undiagnosed glaucoma or excessive pressure within the eye may be present), or by children under twelve years of age, unless direc-

ted by a physician."

Drug Sales Rise

The market research director of Drug Trade News (D.T.N.), in his extensive annual survey, gives the following summary of the 1963 sales of drugs and other health aids—in \$ million:—

	196	53	1962				
	All	Drug	All	Drug			
	Outlets	Stores	Outle	ts Stores			
		Only		Only			
Prescriptions	2,618	2,542	2,448	2,390			
Packaged			•	•			
medication	1,900	1,227	1,852	1,202			
Prescription	,	Í	,	ĺ			
accessories	232	96	227	97			
First aid	176	101	172	99			
Foot products	70	42	69	41			
Baby needs	568	136	564	133			
Feminine needs	284	108	275	106			
Veterinary							
products	254	77	253	77			
Dieting aids	149	69	191	87			
Total	6,252	4,398	6,051	4,232			
The drug	stores	conti	haired	to cell			

The drug stores continued to sell more health aid items than all other outlets combined, even though the number of drug stores declined from 53,879 in 1962 to 53,558 in 1963 and despite competition from supermarkets, department and discount stores, etc. Sales of chain drug stores in 1963 were \$2,269,100,000 as against \$6,525,500,000 for independents—a ratio of 1 to almost 3. But the average per store was for chains \$416,425, for independents only \$135,640.

Research in 1963

The U.S. prescription drug industry reported expenditures of \$282 millions of its own funds on research and development in 1963, an increase of 7 per cent. over 1962, according to the Pharmaceutical Manufacturers' Association (P.M.A.). An additional \$31 millions

is budgeted for 1964, which will put drug industry research expenditures over \$300 millions mark for the first time. Research spending by drug industry amounted to 8 per cent. of total sales in 1963, which is nearly three times the U.S. industrial average. Overseas expenditures for research on human prescription products increased at a faster rate than domestic expenditures in 1963, rising more than 45 per cent. to \$19 millions. Of the total \$282 millions in company-financed expenditures in 1963, \$267 millions was on prescription products for human use, and \$15 millions was for veterinary products. Another \$10 millions in company - conducted research was financed by the government. Thus, firms paid for about 97 per cent. of their research activities, while the allindustry average was only 42 per cent. The P.M.A. survey also revealed that 14,061 scientific personnel were employed in drug industry research activities at the end of 1963, against 13,600 in 1962.

A Limited N.H.S.?

The Senate voted on September 2 by 49 to 44 in favour of President Johnson's proposal for providing medical care for elderly under the social security system. The Bill will now be sent down to the House of Representatives, where a similar measure originally requested by the late President Kennedy has been held in abeyance for the past two years.

New Drugs

The following drugs are marketed:
AMICAR, or aminocaproic acid, is 6aminohexanoic acid; recommended
for the treatment of excessive bleeding from systemic and urinary fifrinolysis (Lederle).

MAXIBOLIN, or ethylestrenol, an anabolic

hormone (Organon).

The following drugs are under test: CAMOLAR or cycloguanil pamoate, gives long-term protection against infection with vivax malaria even after repeated exposure to bites of mosquitoes heavily infested with the Chesson strain of vivax malaria (Parke Davis).

N-(2,6-DICHLORO-M-TOLYL) ANTHRANILIC ACID, a nonsteroidal anti-inflammatory agent 15 times more potent than phenyl-butazone and 150 times more potent than aspirin (Parke Davis).

SEGONTIN PRENYLAMINE, a new drug for angina pectoris (Lloyd Bros.).

TETRAHYDROPAPAVEROLINE, similar in structure to papaverine; acts like papaverine on respiration and like eupaverin on the isolated ileum (Wellcome).



What doctors are reading about developments in drugs and treatments

NO evidence of ovulation, as indicated by levels of urinary excretion of pregnanediol and æstrone, was found in 117 patients taking oral contraceptives, reports a worker at the department of obstetrics, University of Sydney, Australia. In nine patients, twenty cycles were assayed. Normal ovulatory patterns were found to have been re-established in the first cycle after withdrawal of treatment in six patients who had taken oral contraceptives for from one to five years. (Lancet, September 12, p. 557.)

Doctors at hospitals in Randwick, New South Wales, Australia, draw attention, in correspondence, to nine instances in which children with Stevens-Johnson syndrome [characterised by stomatitis, conjunctivitis, skin rash and fever] have come under their care soon after the administration of longacting sulphonamides (sulphamethoxypyridazine and sulphamethoxydiazine). Three of the children died. (Lancet, September 12, p. 593.)

Nineteen out of twenty-four patients with various infections caused by Gram-positive organisms showed complete clinical recovery after treatment with lincomycin hydrochloride, it is reported from the City Hospital, Edinburgh. (B.M.J., September 12, p. 670.)

In a review of gastrointestinal complications arising from the use of broadspectrum antibiotics, its authors find no evidence that vitamins of the B complex are of any preventative value. They suggest that side effects may be greatly reduced by choosing a suitable drug and limiting the daily dose to 1 gm. for tetracycline; 600 mgm. for demethylchlortetracycline; or 1 gm. for ampicillin, except in severe illness. (Drug and Therapeutics Bulletin, September, 4.)

R NEW COMPANIES

P.C. = Private Company. R.O. = Registered Office BEWORTH COSMETICS, LTD. — Capital £100. To carry on the business of manufacturers of and dealers in cosmetics, soaps, etc. Directors: Syed Abbas Ayyub, and Hamida Banu Ayyub, R.O.: 84 Shenley Road, London, S.E.S., G. H. DOLEN, Ltd. (P.C.).—Capital £100. To carry on the business of chemists and druggists, etc. Directors: Mrs. Gwendoline B. Goodall, Miss Helen S. Goodall and Roger M. Goodall, M.P.S. R.O.: 30 Ship Street, Brighton. D. & R. GABRIEL, LTD. (P.C.).—Capital £1,000. To carry on the business of manufac-

D. & R. GABRIEL, LTD. (P.C.).—Capital £1,000. To carry on the business of manufacturers of and dealers in cosmetics. Directors: Donald J. Gabriel and Patricia Gabriel. R.O.: 37 Rothschild Road, London, W.4.

GILAY PERFUMERY PRODUCTS, LTD. (P.C.).—Capital £100. Subscribers: Jean Herbert and Thomas A. Herbert, 156 Strand, London,

V.C.2.

KENSAN (DRUG STORES), LTD. (P.C.).—Capital £100. Objects: To carry on the business of chemists, druggists, etc. Directors: Kenneth R. Pretty and Sandra Moody. R.O.: Drug Stores, 94 Edward Street London S.E. 14

94 Edward Street, London, S.E.14, PARK WOOD PHARMACY, LTD. (P.C.).—Capital £1,000, To carry on the business of dispensing chemists and druggists, etc. Directors: Derek H. Clark and William D. O'Donoghue, M.P.S. R.O.: 11 Park Wood Parade, Maidstone.

PORCE-MASTER SERVICE CO. (BOURNE-MOUTH), LTD. (P.C.).—Capital £100. To carry on the business of chemists and druggists, etc. Subscribers: Stanley H. Lucas and Francis A. Dean, R.O.: Airwork House, 35 Piccadilly, London, W.1.

London, W.1.

PORCE-MASTER SERVICE CO. (BRIGH-TON), LTD. (P.C.).—Capital £100. To carry on the business of chemists and druggists, etc. Subscribers: Stanley H. Lucas and Francis A. Dean. R.O.: Airwork House, 35 Piccadilly, London, W.1.

London, W.1.

PORCE-MASTER SERVICE CO. (DOVER).

LTD. (P.C.).—Capital £100. To carry on the business of chemists, druggists, etc. Subscribers: Stanley H. Lucas and Francis A. Dcan. R.O.: Airwork House, 35 Piccadilly, London, W.1.

S. & S. (CHEMISTS), LTD. (P.C.).—Capital

S. & S. (CHEMISTS), LTD. (P.C.).—Capital £1,000. To carry on the business of chemists and druggists, etc. Directors: David C. Sanderson, M.P.S., and Brian T. Symonds, M.P.S. R.O.: 13 Berwyn Avenue, Hounslow, Middlesex.

13 Berwyn Avenue, Hounslow, Midlesex, STANHOPE CHEMISTS, LTD. (P.C.), Capital £1,000. To carry on the business of retail chemists, druggists, etc. Directors: William S, Smith, M.P.S., Sylvia M, Smith and William B, Holden, M.P.S. R.O.: The Pharmacy, Front Street, Stanhope, co. Durham.

STUDIO GIRL—HOLLYWOOD, LTD. (P.C.).—Capital £5,000. To carry on the business of merchants of and dealers in cosmetics, etc. Subscribers: Richard T. A. Read and Alasdair P. Neil, 1 Threadneedle Street, London, E.C.2.

HÖST-MADSEN MEDAL, 1964

Award to Professor Janot at Amsterdam

THE Höst-Madsen medal, which is awarded at the general assembly of the International Pharmaceutical Congress to a pharmacist considered to have added lustre to the profession, was presented at Amsterdam on September 7 to Professor Maurice-Marie Janot (Faculty of Pharmacy of Paris). Proposing the award, Professor Guillot said that Professor Janot must be considered a remarkable example of the scientific manysidedness of the pharmacist, for he has advanced with equal ease in the domain of the structural organic chemistry of complex molecules, in the pharmacological study of their physiological and their therapeutic properties, and in the more technological matter of presenting his discoveries in suitable galenical form. A hospital intern in 1926, Dr. Janot studied also at

the faculty of science, where he graduated first as Licentiate and then as Doctor of Science. He went on to become Doctor of Medicine, but an early study of the active principles of sage, especially of sclareol, led him into the then almost virgin field of the chemistry of alkaloids and sesquiterpenes. In 1937 he became Master of Conferences in the chair of galenical pharmacy at Paris, becoming its director in 1941 and remaining so for 23 years.

Consulted by Governments

Dr. Janot is "the most eminent scientific member" of the French Pharmacopæia Commission, and is the adviser to governmental authorities on pharmaceutical matters. He was chiefly instrumental in the establishment of an antibiotics industry in France.

PRINT AND PUBLICITY

PUBLICATIONS Medical Propaganda

Manufacturers' leaflets, folders, booklets, etc., directed to doctors but available to pharmaeists,

CIBA LABORATORIES, LTD., Horsham, Sussex: "Ismelin . . . in the treatment of hyperten-

sion " (4-p, folder).

HORLICKS, LTD., PHARMACEUTICAL DIVISION,
Slough, Bucks: "Nulacin . . . safe treatment
for peptic ulcer" (4-p, folder).

for peptic ulcer " (4-p. tolder),

MAY & BAKER, LTD., Dagenham, Essex: "For
your young patient . . . Phenergan elixir"
(4-p. folder), "The position of Stemetil"
(4-p. folder), "Thalazole . . ." and "Strepto-

triad . . . in bacillary dysentery " (blotters).

MERCK, SHARP & DOHME, LTD., Hoddesdon,
Herts: "Hydrodorm

MERCK, SHARP & DOHME, LTD., Hoddesdon, Herts: "Hydroderm , for common skin disorders" (4-p. folder).

ROCHE PRODUCTS, LTD., 15 Manchester Square, London, W.1: "Librium , and the anxious patient" (6-p. folder); ", and organic disease" (4-p. folder); ", and the nervous patient (6-p. folder); ", and functional disease" (6-p. folder). "Symposium on diazepam (Valium)" (10-p. booklet), "Controlled clinical trials of Valium" (12-p. booklet). "Noludar 300 , the safe hypnotic" (6-p. folder).

folder).

SMITH, KLINE & FRENCH LABORATORIES, LTD., Welwyn Garden City, Herts: "Expansyl Span-

welly, Hets. Explaist Spansules . . . for day-long protection against bronchospasm " (4-p, folder).

WILLIAM R. WARNER & Co., LTD., Eastleigh, Hants: "Miscellanca." Information on Gelusil, Urolueosil, Peritrate, Nardil, Anugesic.

PRESS ADVERTISING

CATALINE Co., Sheepscar Works, Sheepscar Street South, Leeds, 7: Cataline. In Farmer's Weekly, British Farmer, Dairy Farmer and Pig Farming.

COLOATE-PALMOLIVE, LTD., 76 Oxford Street. London, W.1: Taekle medicated spot clearing gel for men, In Daily Mirror, Daily Sketch, Reveille, Weekend and Tit-Bits,

COW & GATE, LTD., Guildford, Surrey: Dairy junior foods. In leading women's and nursing

magazines.

Cussons, Sons & Co., LTD., Kersal Vale,

Manchester, 7: Royal Guard. In Daily Mail, Gerhardt-Penick & Co., Ltd., Thornton Labora-tories, Purley Way, Croydon, Surrey: Dethmor. In all leading farming journals.

GLAXO LABORATORIES, LTD., Greenford, Middlesex: Farex, In Sunday Mirror and Woman's

GOLDEN, LTD., Berkeley Square, London, W.1: Color-Match. In Woman, Woman's Own, Daily Express, Daily Mail, Daily Telegraph and other top women's magazines. Elnett hair spray. In women's magazines,

THOS. GUEST & CO., LTD., 92 Carruthers Street, Aneoats, Manchester, 4: Sure Shield iodized throat lozenges. In News of the World, The People, Woman and Woman's Own.

HANIMEX (U.K.), LTD., 42 Lower Marsh, London, S.E.1: Hanimex Zoom 8. In national and photographie Press.

INTERNATIONAL CHEMICAL CO., LTD., Chenies Street, London, W.C.1: Anne French moisture cream cleanser and deep cleansing milk. In newspapers and magazines.

KODAK, LTD., Kodak House, Kingsway, London, W.C.2: Kodak eameras (particularly Instamatie 100) Christmas eampaign, In Daily Express, Daily Mail, Daily Telegraph, Sunday Times, Reader's Digest, Woman, and Woman's Own. Starting November 16.

LIOUFRUTA LABORATORIES. 43 Clapham Road. London, S.W.9: Liqufruta. In Daily Express, News of the World, Daily Mirror, Sunday Mirror and Sun.

MONIL, LTD., Hunmanby, Filey, Yorks: Monil hair colour, In leading women's journals and provincial pewspapers.

MOORE MEDICINAL PRODUCTS, LTD., House, Aberdeen: Codella hand cream, In Woman and Home, Mother, Mother and Baby, People's Friend, Farmers' Weekly, Nursing Mirror, District Nursing, Midwives' Chronicle and British Veterinary Journal.

PERFUMERY DISTRIBUTORS, D'ORSAY D'Orsay House, Northampton Grove, London, N.1: D'Orsay perfumes; In Vogue, Flair, Woman and Home, Tatler, Sunday Times, Illustrated London News, Queen and Observer.

ROBERTS WINDSOR, LTD., 63 Grosvenor Street, London, W.1: Roberts Windsor Christmas gift packs. In Woman, Woman's Own, Woman's Realm, Woman's Mirror and Reader's

LTD., Wheat Bridge Mills, ROBINSON & SONS. Chesterfield: Nikini sanitary protection, In mass circulation women's magazines,

THERMOS, LTD., Ongar Road, Brentwood, Essex: Thermos vaeuum ware, In national Press, leisure magazines and women's magazines.

. WANDER, LTD., 42 Upper Grosvenor Street, Grosvenor Square, London, W.1: Ovaltine baby rusks. In specialist baby publications and women's monthly magazines.

WHITEWAYS CYDER CO., LTD., Whimple, Devon: Sanatogen tonic wine. In national daily and Sunday newspapers and women's magazines.

WOODWARD, LTD., 43 Clapham Road, London, S.W.9: Woodward's Gripe Water, In Daily Express, Daily Mirror, Sunday Mirror, News of the World, Woman's Own, True Story, True Romances, Photoplay, Woman's Story. Mothercare Baby Book, Mother, Mother & Baby and Parents.

COMMERCIAL TELEVISION

Figures in these columns represent the number of appearances of the "spot" during the week.

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WORLD TRADE

Polish Chemicals at Zagreb Fair .--Poland did about £350,000 worth of business at the Spring international fair in Zagreb. The largest share (over a half) was gained by the Ciech foreign trade enterprise, in export contracts for pharmaceuticals and other chemicals.

COMING EVENTS

Items for inclusion under this heading should be sent in time to reach the Editor not later than first post on Wednesday of the week of insertion.

Monday, September 21

ENFIELD CHEMISTS' ASSOCIATION, Enfield Arms hotel, Enfield, at 7.45 p.m. "Holiday Haunts" (members' eolour slides).

HARROW BRANCH, PHARMACEUTICAL SOCIETY, The Havelock, Harrow, at 8 p.m. Discussion on the proposed new constitution of the Society's Council.

Tuesday, September 22

FIFE BRANCH, PHARMACEUTICAL SOCIETY, Anthony's hotel, Kirkcaldy, at 7.30 p.m. Mr. D. F. Pcarmin on "Modernisation of Chemist's Shop."

NORTH STAFFS BRANCH, PHARMACEUTICAL SOCIETY, North Stafford hotel, at 7.45 p.m. Dr. J. Davoll on the "Chemotherapy of Cancer." EADINO BRANCH, PHARMACEUTICAL SOCIETY,

EADINO BRANCH, PHARMACEUTICAL SOCIETY, County Liberal club, Blagrave Street, Reading, at 7,45 p.m. Conference report and social evening.

WEST KENT BRANCH, PHARMACEUTICAL SOCIETY, New Hackwood hotel, Widmore Road, Bromley, at 8 p.m. Mr. E. A. Brocklehurst (a member of the Society's Council) on the proposed ehanges in the Council's constitution,

WORTHING AND WEST SUSSEX BRANCH, PHARMA-CEUTICAL SOCIETY, Cricketers hotel, Broadwater, Worthing, at 8 p.m. Mr. H. S. Grainger (a member of Council) on "The Proposals for the New Constitution for the Society's Council."

Wednesday, September 23

Bradford Branch, Pharmaceutical Society, Busbys' Fountain hall, at 8 p.m. Dr. J. M. Rowson on "A Bradford Apothecary and his Apprentices."

HARROGATE BRANCH, PHARMACEUTICAL SOCIETY.
Tobaceo Research Council laboratories, Otley
Road, Harlow Hill, Harrogate, at 2.15 p.m. Visit to the laboratories.

SHEFFIELD BRANCH, PHARMACEUTICAL SOCIETY,
Royal Victoria hotel, Sheffield, at 8 p.m. Meeting to discuss the proposed new constitution of the Society's Council

THIN-LAYER CHROMATOGRAPHY GROUP, SOCIETY FOR ANALYTICAL CHEMISTRY, lecture theatre, new research block, Boots Pure Drug Co., Ltd., Pennyfoot Street, Nottingham, at 2.30 p.m. Four papers to introduce beginners to thinlayer chromatography.

Thursday, September 24

INTERNATIONAL CHEMISTS' AND DRUGGISTS' TRADE EXHIBITION, Cologne, Western Germany, Until September 28.
Pharmaceutical Group, Royal Society of

HEALTH, 90 Buckingham Palace Road, London,

S.W.1, at 7.30 p.m. Annual meeting.
PURCHASINO OFFICERS' ASSOCIATION, Blackpool, Lancs, Annual conference, Until September 26, PETERBOROUGH BRANCH, PHARMACEUTICAL SOCIETY. Bishop's Road car park, at 1.15 p.m. Visit to Kodak, Ltd., Stevenage.

Sunday, September 27

EAST METROPOLITAN BRANCH, PHARMACEUTICAL SOCIETY, AND WEST HAM ASSOCIATION OF PHARMACISTS, Theydon Bois, at 11 a.m. Car rally.

Advance Information

DONCASTER BRANCH, PHARMACEUTICAL SOCIETY, Normanton hotel, Clumber Park, Worksop. Dinner and dance. Tickets (price 30s, each) must be purchased before October 10.

TRADE MARKS

APPLICATIONS ADVERTISED BEFORE REGISTRATION

From the "Trade Marks Journal," August 26 For non-medicated toilet preparations, prepara-tions for laundry use, and household cleansing preparations, all being goods having foaming properties, but not including abrasive products or polishing and grinding preparations and substances or any goods of the same description

UNIFOAM, 855,983, by Colgate-Palmolive Co., New York, U.S.A.
For nail varnishes, nail polishes and cosmetics (3)

DEMIPERL, 863,536, by Ivo M. Lechner Italian Labs., Ltd., London, W.1.

For rinses for the hair (3)

POLYRINSE, 864,182, Therachemie Chemisch-Therapeutische, G.m.b.H., Düsseldorf, Germany.
For all goods (5)

GARDOL, 851,840, by Colgate-Palmolive Co., New York, U.S.A. PREGNAFOLIN, 864,130, by Glaxo Laboratories, Ltd., Greenford, Middlesex. DIALAFLEX, 864,706, by Allen & Hanburys, Ltd., London, E.2.

For pharmaceutical preparations and substances

CRATAGUTT, VENOPLANT, 857,460-61, by Dr. Willmar Schwabe, G.m.b.H., Carlsruhe-Durlach, Western Germany, SUVITA, Durlach, Western Germany, SUVITA, 857,514, by West Pharmaceutical Co., Ltd., Hove, Sussex. VALMONT, 861,235, by Valmont Laboratories Ltd., London, N.W.8.

For sedative pharmaceutical preparations (5) SOMNULES, 861,198, by E. C. de Witt & Co., Ltd., Croydon, Surrey.

For milk powder prepared for use as infants'

and invalids' foods and dietetic foods (5)

SPRITE, 862,508, by Nestlé Co., Ltd., London, E.C.2.

For pharmaceutical, veterinary and sanitary pre-

parations and substances (5) ECONOCIL V-K, 864,690, by Chelsca Drug & Chemical Co., Ltd., London, W.1.

For photographic and cinematographic apparatus and instruments; and parts and fittings (9)
AMBIPAR, MOVEXY, 863,578-78, by Agfa,

A.G., Leverkusen-Bayerwerk, Germany.

For hearing aids for the deaf (10)

SPECTRON, 859,285, by Multitone Electric

Co., Ltd., London, N.1.
For electro-medical acoustic apparatus, hearing

aids for the deat, medical instruments and apparatus for detecting and estimating the degree of deafness, and parts of all such goods (10) SONASCOPE, B859,615, by Multitone Electric

Co., Ltd., London, N.1.

From the "Trade Marks Journal," September 2

For chemical products for use in agriculture, horticulture and forestry; and manures (1) and for preparations for killing weeds and destroying

vermin; fungicides and insecticides (5) CARATOP, 861,553-54, DAKAROL, 861,555-56, PRINTOP, 861,559-60, by J. R. Geigy, S.A., Basle, Switzerland.

For preparations for use in the permanent waving

of colour treated hair (3)

REALISTIC COLOR MATE, B828,372, by
Realistic Co., Cincinatti, Ohio, U.S.A.

For detergents, not for use in industrial processes,

or in the course of manufacture (3) BENCO, B835,727, by A. E. Bennett & Co., Ltd., Liverpool, 3.

For essential oils; aromatic substances for use in the manufacture of perfumes and of perfumed articles; natural perfumes; perfume compounds; floral essences (3)

Device with words BRUNO COURT, 844,241, by Bruno Court, S.A., Jean Roure & Cie, Grasse (A.M.), France.

For skin creams (not medicated), perfumes and essential oils (3)
AMBI, 858,681, by African Pharmaceutical

Distributors (Private), Ltd., Hatfield, Salisbury, S. Rhodesia.

For perfumes, non-medicated toilet preparations, cosmetic preparations, dentifrices, depilatory preparations, toilet articles (not included in other classes), sachets for use in waving the hair, shampoos, soaps and essential oils (3)

SANS SAGESSE, 863,619, by Benedict Friars, Ltd., Penydarren, Merthyr Tydfil.

For perfumes, non-medicated toilet preparations, cosmetics, preparations for the hair, essential oils, soaps and dentifrices (3)

DETCHEMA, 862,684, by Parfums Revellon, Paris, France.

For all goods (3)

Device with word and letters FIRMENICH CNC, B859,933, by Firmenich et Cie, Geneva, Switzerland. WATONA, 862,903, by Watts Brothers (Manchester), Ltd., Manchester, 4. For all goods (5)

Device, 846,208, by American Cyanamid Co. Device, 846,208, by American Cyanamid Co., Wayne, New Jersey, U.S.A. DECHLORANE, 854,166, by Hooker Chemical Corporation, Niagara Falls, New York, U.S.A. IBLIN. 859,239, INTRAFLODEX, 864,459, by Glaxo Laboratories, Ltd., Greenford, Middlesex. Laboratories, Ltd., Greenford, Middlesex. BIOBAMAT 863,839, by Biochemie, G.m.b.H.,

Kundl, Tyrol, Austria.
or infants', invalids' and dietetic foods, and dietetic pharmaceutical preparations (5)

PROPLAN, 855,834, by Genatosan, Ltd., Loughborough, Leics.

For medicated preparations for treatment of the body and the skin (5)

BIDEX, 851,529, by Ed. Geistlich Sohne, A.G. fur Chemische Industrie, Lucerne, Switzerland.

For herbicides sold in drums and in paper bags (5)

ARESIN, 856,518, by Farbwerke Hoechst, A.G. vormals Meister Lucius & Brüning, Frankfort-on-Main-Hoechst, Germany.

For insecticides and pesticides, all being veterinary substances; sheep dips and sheep washes; and medicated bath preparations (5)

DIS, 858,378, by British Products Sanmex Co., Ltd., Rutherglen, nr. Glasgow.

For medicated substances for the care and treatment of hæmorrhoids (5)

HEMOPONS, 858,671, by Me (Laboratories), Ltd., London, W.1. Merrell-National

For medicated confectionery (5)

CHOATES, 859,646, by Bensons Confectionery, Ltd., Bury, Lancs.

For pharmaceutical preparations and substances (5)

KIDIVITE, 859,692, by Sterwin, A.G., Zug, Switzerland. ARCANGYL, 861,566 by Roussel-Uclaf, Paris, France.

For pharmaceutical preparations and substances in tablet form (5)

ANXOL, 861,597, by H. Lundbeck & Co., A/S, Copenhagen, Denmark.

For medicated fruit beverages sold in bottles, for consumption by infants (5)

PLAYMATE, 862,006, by Beecham Foods, Ltd., Brentford, Middlesex. For medicated fruit beverages for consumption

by infants (5) CRIB, 862,010, by Beecham Foods, Ltd.,

Brentford, Middlesex.

For medicinal preparations in tablet form (5) DUDUNUL, 865,409, by F. Roberts Remedies, Ltd., Bristol, 1.

For medical, pharmaceutical and veterinary pre-parations and substances (5) ACTIVAX, 866,082, by Wellcome Foundation,

Ltd., London, N.W.1. For pharmaceutical preparations and products (5)

SILUDROX, 866,086, by American Home Products Corporation, New York, U.S.A.

For pharmaceutical preparations and veterinary products (5)

CRASNITIN, 865,469, by Farbenfabriken Bayer, A.G., Leverkusen, Germany.

For pharmaceutical and medicinal preparations (5) CORVASODRIN, 866,028, by Lovens Kemiske Fabriks Handelsaktieselskab, Ballerup, Denmark, KENOIDAL, 866,204, by E. R. Squibb & Sons, Ltd., Twickenham, Middlesex, For pharmaceutical preparations for human use

and for veterinary use (5)

CENTOFER, 866,236, by CIBA, Ltd., Basle, Switzerland.

For veterinary preparations (5)

COVAS, DAYILLAN, DAYOLA, DAYPAN, 866,495-98, by Day & Sons (Crewe), Ltd., Crewe. Ches.

For lenses and lens systems for photography and cinematography (9)
GALAXY, 860,541, by Dixons Photographic,

Ltd., Edgware, Middlesex.
For battery-operated razors (8)

REX, 865,452, by Coronet, Ltd., Birmingham.

PATENTS

COMPLETE SPECIFICATIONS ACCEPTED

From the " Official Journal (Patents)," September 2

Process for the production of a clarified malt extract. Dominion Breweries, Ltd. 972,251.

Processes for removing acidic components from

gaseous mixtures. Associated Electrical Industries, Ltd. 972,284.

Dry shaver. Braun, A.G. 972,297.

Photographic developing machine, I. Halden & Co., Ltd. 972,312.

Production of magnesium hydroxide, Morton Salt Co. 972,323.
Rodent repellent compositions, Matsushita Elec-

tric Works, Ltd. 972,422. Process for production of bromo-fluoro-ethanes.

Dow Chemical Co. 972,423. Process for the preparation of dialkanolamides. Unilever, Ltd. 972,440.

Sensitive photographic materials and methods of development thereof. Kodak, Ltd. 972,441.

Purification of cyclohexane oxidation products. Halcon International, Inc. 972,443.

Kinematographic method and apparatus, International Polaroid Corporation, 972,568

Film strip projector and cassette. Scroll Film Industries, Inc. 972,634.

Apparatus for the determination of the stiffness of gels and a method therefor, National Research Development Corporation, 972,635.

Stabilisation of organic peroxides, Chemical Industries, Ltd. 972,655. Imperial

Production of adipic acid. Imperial Chemical Industries, Ltd. 972,656.

Device for promoting relaxation. W. Dubiller

and E. G. Cotton. 972,659.

Pharmaceutical preparations containing com-pounds of the androstane series. CIBA, Ltd.

Photographic camera, Agfa, A.G. 972,680,

Single lens reflex photographic camera, Voigtlander, A.G. 972,697.

Gas-mixture fractionating systems. Philips' Glocilampenfabriken, N.V. 972,698.

Methods of filtration and apparatus therefor.
Chemical Equipment Engineering, Ltd. 972,730.
Artery clamps. M. Gerendas, 972,731.
Apparatus for filtering and separating immiscible

liquids. J. Muller. 972,742.

Method and apparatus for thickening a suspen-sion, Bahco, A.B. 972,746.

British patent specifications relating to the above will be obtainable (price 4s, 6d, each) from the Patent Office, 23 Southampton Buildings, Chanccry Lane, London, W.C.2, from October 14.

From the "Official Journal (Patents)," September 9

Photographic shutter, Agfa, A.G. 972,857.

Method for the preparation of a pancreatic heparinoid. Crinos Industria Farmacobiologica, S.p.A. 972,866.

Method for the prevention of damage to plants by nematodes. R. Masg, A.G. Chemische Fabrik Dielsdorf, 972,871.

Homogenising apparatus, Alpura, A.G. 972,876, 2-amino-(mono- or di-substituted)-ethyl-guanidines, Soc. Farmaceutici Italia, 972,888.

British patent specifiations relating to the above will be obtainable (price 4s, 6d, each) from the Patent Office, 23 Southampton Buildings, Chancery Lane, London, W.C.2, from October 21.

CONTEMPORARY THEMES

Subjects of contributions in current medical and technical periodicals

THROMBOLYTIC AGENTS. Are thrombolytic agents more effective if given near the thrombus? Brit, med. J., September 5.

PESTICIDES and animal poisoning. Vet. Rec., September 5.

Purified interferons: Physical properties and species specificity. Science, August 21.

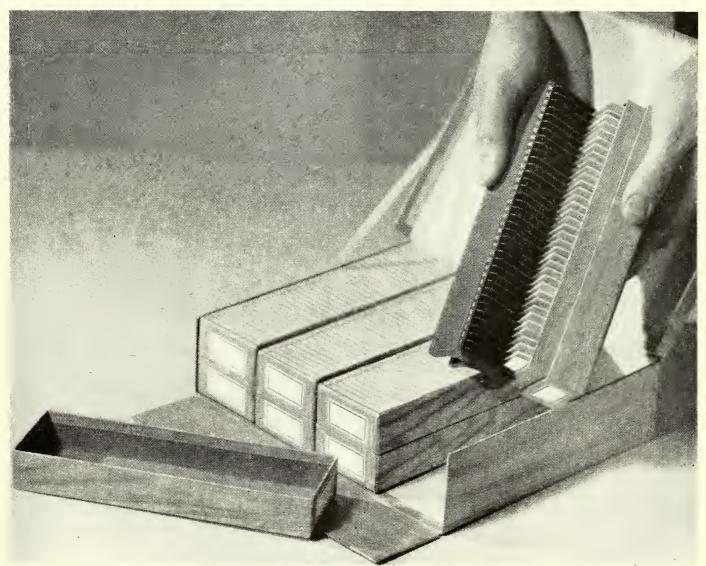
INTERFERONS, Host cell species specificity of mouse and chicken interferons, Science, August 21.

IMMUNIZATION. Antibody response to, by different routes. Science, August 21.

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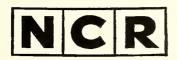


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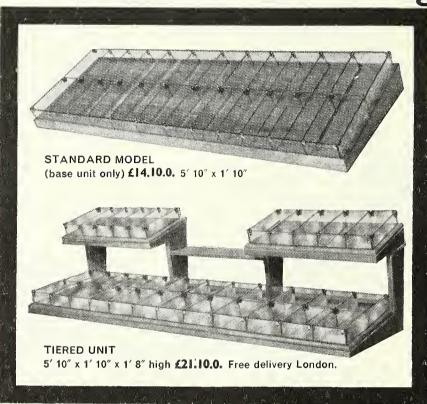
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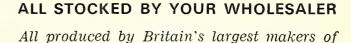
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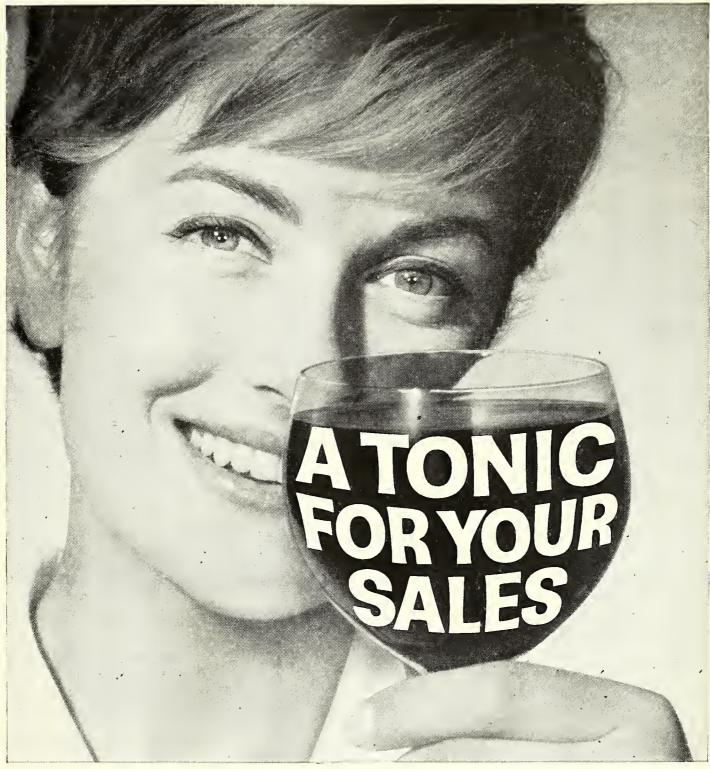
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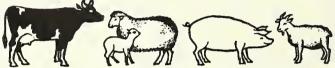
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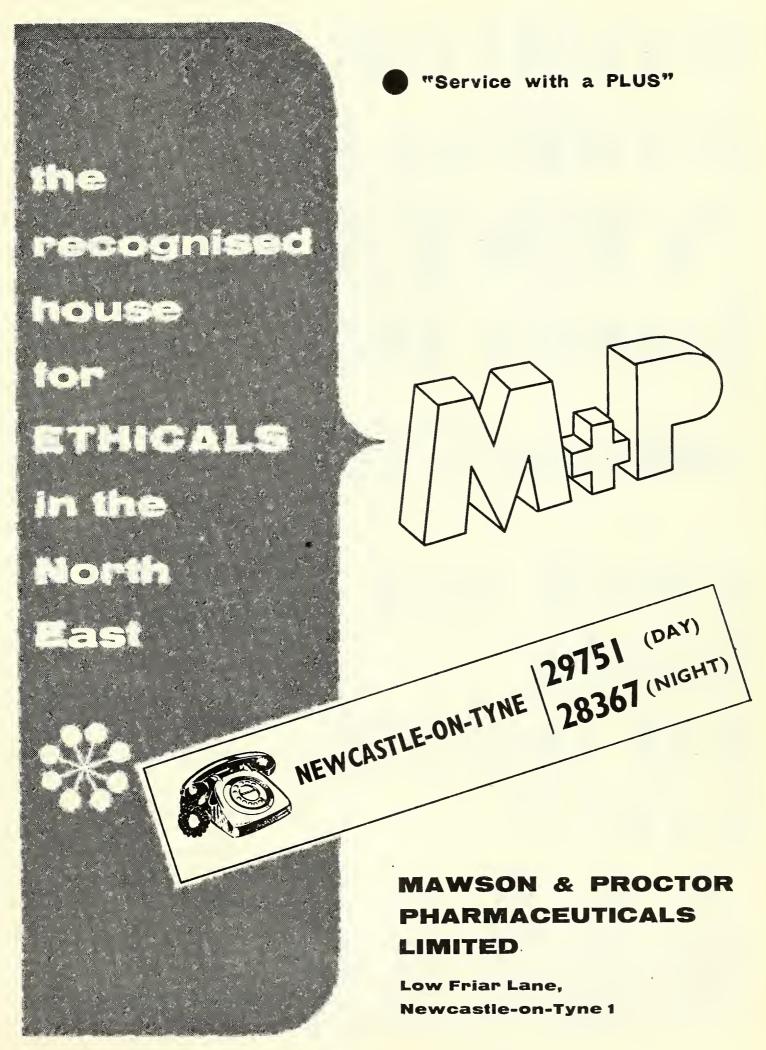
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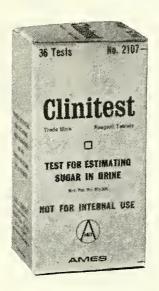
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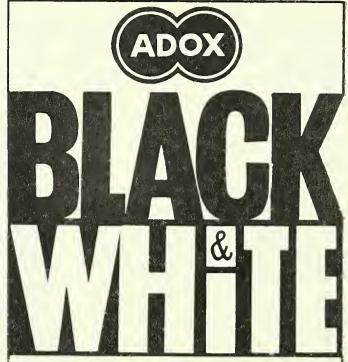


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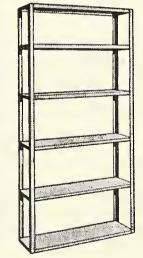




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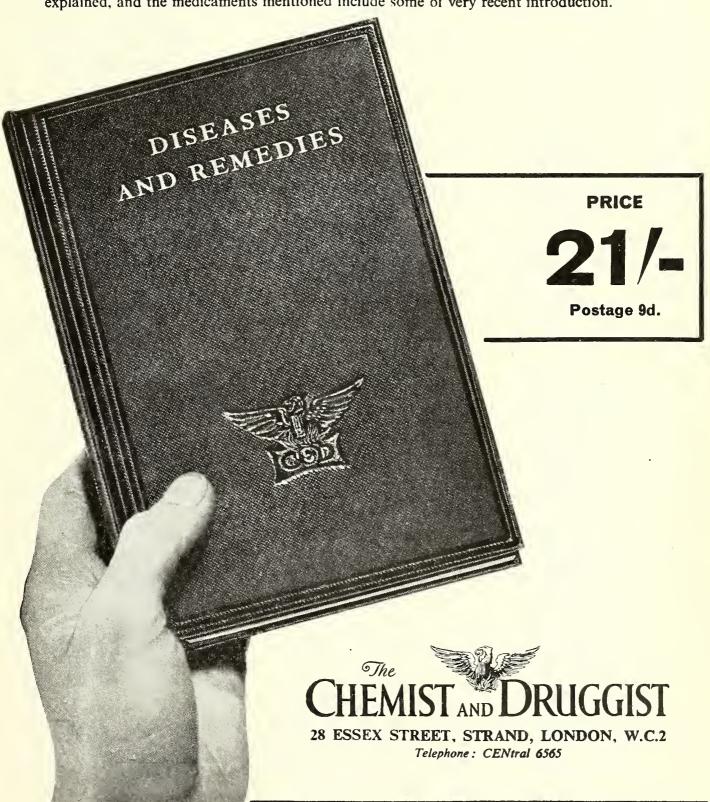
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APPOINTMENTS

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Pharmacist
(Basic Grade), £761-£1,019 per annum, for interesting work in a well equipped Pharmacy. Applications, giving full details and naming two referees, to Administrator.

C 9506

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CAMBERWELL HOSPITALS MANAGEMENT COMMITTEE

Chief Pharmacist (Category I)

Applications invited for the post of Chief Pharmacist (Category I), St. Francis' Hospital, Constance Road, S.E.22. Salary £898 x 8 increments to £1,233 p.a. plus London Weighting Allowance.

Apply Group Secretary, Dulwich Hospital, East Dulwich Grove, S.E.22. Locum considered. C 9460

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Deputy Chief Pharmacist

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CENTRAL GROUP HOSPITAL MANAGEMENT COMMITTEE

Locum Pharmacist

required for holiday relief duties in Hospitals within the group, September 21 to October 3, 1964, Salary £20 19s. Applications to the Chief Pharmacist, Metropolitan Hospital, Kingsland Road, E.8, CLI, 6862, C 663

DULWICH HOSPITAL, EAST DULWICH GROVE, LONDON, S.E.22

Pharmacist, whole-time or part-time, and

Dispensing Assistant required

Whitley Council terms and conditions, Apply to the Chief Pharmacist, Dulwich Hospital, East Dulwich Grove, London, S.E.22, C 9499

GREENWICH DISTRICT HOSPITAL, ST. ALFEGE'S WING, S.E.10

Locum Pharmacist

full- or part-time, Salary £20 19s, a week or pro-rata for up to eight weeks. Apply Chief Pharmacist (GRE, 2655). C 9503

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Dispensing Assistant

Part-time — 23 hours per week. Whitley Council pay and conditions. Apply to Group Secretary. . C 9493

LONDON JEWISH HOSPITAL, STEPNEY GREEN, E.1

Locum Pharmacist

required at the above hospital, Modern department, Every third Saturday morning off. Previous hospital experience not essential, Salary £19 19s, per week, Applications to the Chief Pharmacist (Telephone STE, 1222, Ext, 219).

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Pharmacist

Pharmacist
required at the above hospital. Modern department giving good general experience.
Every third Saturday morning off. Previous hospital experience not essential. Whitley Council conditions of service and salary.
Applications in writing stating age, qualifications and experience together with the names of two referees to the Chief Pharmacist.

C 9490

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Pharmacist

Applications arc invited for the post of Pharmacist at the above Hospital. This is a Category V Post-graduate Teaching Hospital with a modern, well-equipped pharmacy. Whitley Council salary and conditions of service. Applications, stating age and qualifications, with names of two referees to the Chief Pharmacist, Moorfields Eye Hospital, City Road, London, E.C.1. C 9484

MOORFIELDS EYE HOSPITAL

Dispensing Assistant

Applications are invited for the post of Dispensing Assistant at the High Holborn Branch, London, W.C.1. Preferably with the Certificate of Society of Apothecaries or other recognised qualification. Whitley Council salary and conditions of service.

Apply, in writing, giving names of two referees, to the Chief Pharmacist, Moorfields Eye Hospital, City Road, London, E.C.1. C 9483

MOORFIELDS EYE HOSPITAL

Locum Pharmacist

required from 28th September, Applications to the Chief Pharmacist, Moorfields Eye Hospital, City Road, London, E.C.1. C 9485

NEWMARKET GENERAL HOSPITAL

Dispensing Assistant

required in modern Group Pharmacy, Ideal working conditions, alternate long weekends. Applications giving age, experience and names of two referees to the Group Pharmacy C 9498

NORTH WIRRAL HOSPITAL MANAGEMENT COMMITTEE, VICTORIA CENTRAL HOSPITAL, LISCARD ROAD WALLASEY, CHESHIRE

Pharmacist
full-time. Salary according to scale agreed
by the Whitley Council.
Applications to Hospital Secretary. C 9474

PADDINGTON GENERAL HOSPITAL, HARROW ROAD, W.9

Locum Pharmacist

required for indefinite period. Apply immediately to the Hospital Secretary. C 666

ROYAL FREE HOSPITAL

Pharmacist

Applications are invited for the post of Pharmacist at the above Hospital, Whitley Council salary scale with extra pay for evening clinics. Apply naming two referees to Group Chief Pharmacist, Royal Free Hospital, Gray's Inn Road, W.C.1. C 679

ROYAL MARSDEN HOSPITAL, FULHAM ROAD, LONDON, S.W.3

A Post-graduate Teaching Hospital

Senior Pharmacist

Senior Pharmacist required to work in a new well-equipped department. Post offers a wide variety of duties, some in association with the Institute of Cancer Research, Salary £851—£1,113 p.a. according to previous experience plus London allowance and £25 a year for higher qualification allowance. Applications with names of two referees to the Group Pharmacist, FLAxman 8171, Ext. 17. C 9489

SPRINGFIELD HOSPITAL, BEECHCROFT ROAD, UPPER TOOTING, LONDON, S.W.17

required. Salary without experience, £237 at 16, rising to £597 plus London Weighting. Salary with qualifications, £349 at 18, rising to £678 plus London Weighting. Five-day week, Active Psychiatric Hospital, Applications, giving full details and names of two referees to the Group Secretary. C 9482

ST. GILES' HOSPITAL, ST. GILES' ROAD, CAMBERWELL, S.E.5

Locum Pharmacist
part-time or sessional required immediately Immediately.

Apply: Chief Pharmacist, St., Giles' Hospital, St., Giles' Road, Camberwell, S.E.S., (RODney 4221.)

ST. LEONARD'S HOSPITAL, **NUTTALL STREET, N.1**

required for September, 1964. Applications to Chief Pharmacist, Telephone: SHOreditch C9488

PUBLIC APPOINTMENTS

CHIEF PHARMACIST-

H.M. PRISON SERVICE

Registered Pharmacist, aged 25 or over, required for a Chief Pharmacist Category II post at H.M. Prison Pentonville, London, N.7.

Salary scale £987 to £1,323 plus £40/£55 N.H.S. London Weighting and £54 environment allowance.

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STEPNEY GROUP HOSPITAL MANAGEMENT COMMITTEE, MILE END HOSPITAL, BANCROFT ROAD, LONDON, E.1

Deputy Chief Pharmacist (Category IV)

Applications are invited for the post of Deputy Chief Pharmacist (Category IV) at Mile End Hospital. Whitley Council conditions of service. Further particulars may be obtained from the Chief Pharmacist (Tel.: ADVance 4855). Applications stating age, qualifications, experience and the names of two referees to the Group Secretary at the above address.

ST. ALBANS CITY HOSPITAL, NORMANDY ROAD, ST. ALBANS, HERTS (402 beds)

Senior Pharmacist or Pharmacist

Applications are invited for the above post at this hospital within easy reach of Central London. Whitley Council salary and conditions of service. Detailed applications naming two referees to the Chief Pharmacist. C 652

ST. GILES' HOSPITAL, ST. GILES' ROAD, CAMBERWELL, S.E.5

Senior Pharmacist

Applications invited for the post of Senior Pharmacist, Salary scale £896—£1,168 p.a. Part-time or sessional considered, Further details from, or applications to. Chief Pharmacist. C 9461

ST. MARY ABBOTS HOSPITAL, MARLOES ROAD, KENSINGTON, W.8

Pharmacist

required, Good working conditions in modern department, Hospital conveniently situated near Kensington High Street and Earl's Court. 39-hour week with alternative free Saturdays, Previous Hospital experience not essential. Commencing salary £761—£898 according to experience, plus London Weighting. Applications naming two referees to House Governor. Enquiries to Chief Pharmacist, WEStern 8201. C 9496

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- (a) St. Andrew's Hospital, Devous London, E.3.
 (b) East Ham Memorial Hospital, Shrewsbury Road, Forest Gate, E.7.

2. Pharmacist

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OPPORTUNITY OCCURS for young pharmacist to take charge of busy modern branch shop. Chester city centre, Good salary and profit participation geared to results. Box C 6333.

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C 655

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